

SHEKAR ENGINEERING, PLC

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AWQ (6)

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**Con 12-1-1
Doc # 32990**

November 29, 2005

Mr. Marlo Gillotti, President
The Gillotti Companies
5600 Enterprise Drive
Grimes, IA 50111

**RE: Concrete Supply Construction Rubble Site
1108 SE 30th Street, Des Moines, Iowa.
Landfill Permit #77-SDP-86P.**

Dear Mr. Gillotti:

Enclosed please find 2005 annual site monitoring report for the referenced site. The Iowa Department of Natural Resources approved Hydrologic Monitoring System Plan (HMS) requires submittal of annual monitoring reports. I have submitted a copy of the annual monitoring report to the IDNR.

Should you have any questions or need additional information, please feel free to call Mr. Chandra Shekar at 515-334-5062.

Sincerely,



Mr. Chandra Shekar, P.E.
Iowa P.E. Registration #13663

✓cc:

Mr. Jeff Simmons
IDNR Energy & Waste Management Bureau
Wallace State Office Building
Des Moines, IA 50319

ANNUAL LANDFILL MONITORING REPORT (2005)

**CONCRETE SUPPLY AND CONSTRUCTION RUBBLE SITE
1108 SE 30TH STREET
DES MOINES, IA**

IDNR PERMIT NUMBER: 77-SDP-24-86P

SUBMITTED TO

The Gillotti Companies
5600 Enterprise Drive
Grimes, IA 50111

and

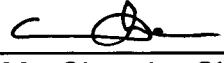
Solid Waste Section of the IDNR

PREPARED BY

**SHEKAR ENGINEERING, PLC
PO BOX 3625
DES MOINES, IA 50322
Phone: 515-334-5062, FAX: 515-334-5052**

Project Engineer: Mr. Chandra Shekar, P.E.

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Iowa.

Signature: 

Name: Mr. Chandra Shekar, P.E.
Date: 11/29/2005
Registration No.: 13663
Expiration Date: 12/1/2005



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OUTSTANDING

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SITE MONITORING ANNUAL REPORT - 2005

Concrete Supply Construction Rubble Site

(Landfill Permit #77-SDP-86P)

1108 SE 30th Street, Des Moines, Iowa 50137.

1.0 Introduction:

Shekar Engineering (SE) has prepared this annual report for the Concrete Supply and Construction Rubble Site in Des Moines, Iowa. The report is based upon semi-annual and annual groundwater sampling of the on-site monitoring wells and a surface water body.

2.0 Background Information

The Concrete Supply and Construction Rubble Site in Des Moines, Iowa, which used to be a construction and demolition (C & D) Landfill was closed in 1989. At present, the site does not accept any regulated material. However, to fill the low-lying areas of the site, clean dirt and broken concrete are accepted.

Geological units encountered during drilling generally consisted of approximately 5 to 23 feet of fill underlain by approximately 40 to 60 feet of well graded sands with gravels overlying gray and dark gray shales. The shales encountered at the site appear to be consistent with the regional Pennsylvanian-age, Cherokee Group shales. Groundwater is at approximately 20 to 25 feet below ground surface. Groundwater flow direction across the site is towards south.

A Hydrologic Monitoring System Plan (HMSP) was approved (6/19/96) by the Iowa Department of Natural Resource (IDNR) and required quarterly site monitoring for the first year and semi annual site monitoring for the second year and so on. Landfill Closure Permit was approved in January 2000.

As part of the monitoring, groundwater and surface water samples were collected and analyzed for Iowa Landfill Parameter e during semi-annual monitoring events (April), and for e and f during the annual monitoring event (October). The analytical results of the groundwater and surface water samples are tabulated in Tables 1 thorough 10.

3.0 Monitoring Well Maintenance and Performance Evaluation

SE evaluated water levels in the monitoring wells using the data obtained during the current annual sampling event and previous sampling events. This evaluation indicates that depth to water in monitoring wells is consistent.

Measurements taken between 1997 and 2003 indicate that all wells are intact and capable of measuring the required parameters. A Table showing the monitoring well location and the respective aquifers is indicated below.

Monitoring Well Locations and the Respective Aquifers

Upgradient Wells	MW-92-1, MW-92-2, MW-92-1R
Downgradient Wells	MW-92-4, MW-92-5, MW-92-6, MW-92-7
Crossgradient Well	MW-92-3
Upper Aquifer Wells (Monitoring wells are at shallow depth)	MW-92-1, MW-92-1R, MW-92-3, MW-92-4, MW-92-6
Lower Aquifer Wells (Monitoring wells that are deep)**	MW-92-2, MW-92-5, MW-92-7

**Note: Lower Aquifer Wells (MW-92-2 and MW-92-7 were drilled a few feet in to shale layer (bedrock); and MW-92-5 was drilled 13 feet in to the bedrock. The 13 feet borehole (in bedrock) was plugged using bentonite. The screened intervals of these wells (MW-92-2, MW-92-5, & MW-92-7) do not extend in the bedrock.)

The IDNR letter dated January 4, 2000 required installation of an upgradient well to monitor for Trichloroethylene. A monitoring well (MW-92-1R) was installed to the south of MW-92-1 in March of 2000.

4.0 Groundwater Table Contour

Groundwater table contour maps (Appendix – 2) were developed using the static groundwater levels (SWLs) recorded in April and October of 2005. The groundwater flow direction in the vicinity of the site is towards south. A review of the SWLs does not indicate groundwater mounding at the site. Static groundwater levels are tabulated below.

Monitoring Well	Top of Casing Elevation	SWL on 4/28/05	SWL on 10/27/05	Comments
MW-92-1	796.82	774.12	776.38	Upgradient shallow well
MW-92-2	797.47	774.10	775.99	Upgradient deep well
MW-92-1R	789.92	773.62	776.07	Upgradient shallow well
MW-92-3	797.70	772.35	775.32	Crossgradient shallow well
MW-92-4	799.27	771.96	774.87	Downgradient shallow well
MW-92-5	799.52	772.16	775.04	Downgradient deep well
MW-92-6	801.38	772.33	775.01	Downgradient shallow well
MW-92-7	801.50	772.22	774.99	Downgradient deep well
L-1	799.80	Dry	Dry	Leachate piezometer
L-2	806.15	Dry	Dry	Leachate piezometer

5.0 Methods of Statistical Analysis

SE personnel collected groundwater samples from 8 monitoring wells (MW-92-1, through MW-92-7, and MW-92-1R) and a surface water body (SW-1). The samples were collected according to the protocols set forth in the HMSP and sent to a certified laboratory for analysis of the proper parameters.

Keystone Laboratories of Newton, Iowa conducted the laboratory analyses of groundwater and surface water samples. After receiving the results of the laboratory analyses, SE personnel conducted statistical analysis on the groundwater monitoring data to evaluate the impact of the landfill on the groundwater quality. The mean and standard deviation of each parameter for upgradient monitoring points were calculated as required in Subrule 567-103.2 (6) of the IAC.

After entering the laboratory results and field measurements into a spreadsheet, the following formula was used to calculate the standard deviation:

$$s = \left(\sum \frac{(x - M)^2}{n - 1} \right)^{1/2}$$

Where:

- s = sample standard deviation
- x = individual data
- M = sample mean
- n = number of data points in set

The downgradient control limits were calculated separately for the upper and lower aquifers. The results of the statistical evaluation are indicated in Tables 12 through 15.

6.0 Discussion

SE did not conduct a statistical evaluation of chemicals, which were always below the laboratory detection limits. The details of the statistical evaluation exceedences are tabulated in Table 12 through 15. Specific information included in these Tables is indicated below:

- Table 12 indicates the contaminants, which exceeded upgradient mean +2(standard deviation) in the upper aquifer (monitoring wells are shallow).
- Table 13 indicates the contaminants, which exceeded both action level and upgradient mean +2(standard deviation) in the upper aquifer.
- Table 14 indicates the contaminants, which exceeded upgradient mean +2(standard deviation) in the lower aquifer (monitoring wells are deep).
- Table 13 indicates surface water sampling results that exceeded action levels

6.1 Methane monitoring: SE personnel conducted methane monitoring along the landfill boundary and fill area. Table 16 indicates the monitoring results from January 2001 through April 2002. A map indicating the location of methane sampling is attached to Appendix 2. Non-detectable concentrations of methane were recorded during this period.

Shekar Engineering requested IDNR for a variance to terminate methane monitoring. The IDNR approved (May 20, 2002) Amendment #4 to the permit and allowed termination of methane monitoring.

6.2 Leachate Wells: Piezometers L-1 and L-2, which were installed to monitor leachate quality and migration have always remained dry. This is an indication that the landfill leachates are not impacting the local groundwater.

7.0 Recommendation

Shekar Engineering recommends continued site monitoring in accordance with the approved Hydrologic Monitoring System Plan.

APPENDIX - 1
TABLES

TABLE-1: GROUNDWATER ANALYTICAL RESULTS (MW-92-1)

Boring / Well Number	MCL or Action Level	MW-92-1	MW-92-1	MW-92-1	MW-92-1	MW-92-1	MW-92-1	MW-92-1	MW-92-1
Date Sampled	NA	4/2/97	7/28/97	10/20/97	1/28/98	9/10/98	3/23/99	4/25/00	10/25/00
Elevations - Ground Surface	NA								
- Top of Screen	NA								
- Static Groundwater	NA	18.13	16.55	18.88	19.28	15.57	19.06	21.53	21.06
1,1,1-Trichloroethane ($\mu\text{g/L}$)	200	<1	<1	<1	<1	NT	<1	NT	NT
1,1-Dichloroethane ($\mu\text{g/L}$)	NA	<1	<1	<1	<1	NT	<1	NT	NT
1,2-Dichloroethane ($\mu\text{g/L}$)	5	<0.4	<0.4	<0.4	<0.4	NT	<0.4	NT	NT
1,4-Dichlorobenzene ($\mu\text{g/L}$)	600	<1	<1	<1	<1	NT	<1	NT	NT
Benzene ($\mu\text{g/L}$)	5	<1	<1	<1	<1	NT	<1	NT	NT
Carbon Tetrachloride ($\mu\text{g/L}$)	5	<0.3	<0.3	<0.3	<0.3	NT	<0.3	NT	NT
Trichloroethylene ($\mu\text{g/L}$)	5	6.4	3	6	6.9	NT	6.3	9.7	20
Arsenic, dissolved (mg/L)	0.05	<0.001	<0.001	<0.001	<0.001	NT	<0.001	NT	NT
Barium, dissolved (mg/L)	2	0.091	0.089	0.085	0.098	NT	0.085	NT	NT
Cadmium, dissolved (mg/L)	0.005	<0.001	<0.001	<0.001	<0.001	NT	<0.001	NT	NT
Chromium, dissolved (mg/L)	0.1	<0.03	<0.03	<0.03	<0.03	NT	<0.03	NT	NT
Copper, dissolved (mg/L)	1	<0.03	<0.03	<0.03	<0.03	NT	<0.03	NT	NT
Iron, dissolved (mg/L)	0.3	<0.03	<0.03	<0.03	<0.03	<0.03	0.102	<0.03	<0.03
Lead, dissolved (mg/L)	0.015	<0.005	<0.005	<0.005	<0.005	NT	<0.005	NT	NT
Magnesium, dissolved (mg/L)	NA	46.7	46.9	43.3	45	NT	42.1	NT	NT
Mercury, dissolved (mg/L)	0.002	<0.0005	<0.0005	<0.0005	<0.0005	NT	<0.0005	NT	NT
Zinc, dissolved (mg/L)	5	<0.03	<0.03	<0.03	<0.03	NT	<0.03	NT	NT
Chemical Oxygen Demand (mg/L)	NA	<10	<10	<10	<10	<10	<10	<10	<10
Chloride (mg/L)	250	40	49	41	44	49	34	37	41
Nitrogen, Ammonia (mg/L)	NA	<1	<1	<1	<1	<1	1.9	<1	<1
Phenols, total (mg/L)	4	NT	NT	NT	<0.1	NT	<0.1	NT	<0.1
Total Organic Halogens (TOX) (mg/L)	none	NT	NT	NT	0.05	NT	0.07	NT	0.07

NT = Not Tested

TABLE-1 Continued: GROUNDWATER ANALYTICAL RESULTS (MW-92-1)

Boring / Well Number	MCL or Action Level	MW-92-1	MW-92-1	MW-92-1	MW-92-1	MW-92-1	MW-92-1	MW-92-1	MW-92-1
Date Sampled	NA	4/30/01	10/29/01	4/26/02	10/31/02	4/24/03	10/30/03	4/30/04	10/13/04
Elevations - Ground Surface	NA								
- Top of Screen	NA								
- Static Groundwater	NA	19.04	19.57	20.85	19.70	20.69	20.02	18.95	18.17
1,1,1-Trichloroethane ($\mu\text{g/L}$)	200	NT	NT	NT	NT	NT	NT	NT	NT
1,1-Dichloroethane ($\mu\text{g/L}$)	NA	NT	NT	NT	NT	NT	NT	NT	NT
1,2-Dichloroethane ($\mu\text{g/L}$)	5	NT	NT	NT	NT	NT	NT	NT	NT
1,4-Dichlorobenzene ($\mu\text{g/L}$)	600	NT	NT	NT	NT	NT	NT	NT	NT
Benzene ($\mu\text{g/L}$)	5	NT	NT	NT	NT	NT	NT	NT	NT
Carbon Tetrachloride ($\mu\text{g/L}$)	5	NT	NT	NT	NT	NT	NT	NT	NT
Trichloroethylene ($\mu\text{g/L}$)	5	4.4	4.8	5.9	6.8	7.3	7.0	6.3	6.4
Arsenic, dissolved (mg/L)	0.05	NT	NT	NT	NT	NT	NT	NT	NT
Barium, dissolved (mg/L)	2	NT	NT	NT	NT	NT	NT	NT	NT
Cadmium, dissolved (mg/L)	0.005	NT	NT	NT	NT	NT	NT	NT	NT
Chromium, dissolved (mg/L)	0.1	NT	NT	NT	NT	NT	NT	NT	NT
Copper, dissolved (mg/L)	1	NT	NT	NT	NT	NT	NT	NT	NT
Iron, dissolved (mg/L)	0.3	0.368	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	0.208
Lead, dissolved (mg/L)	0.015	NT	NT	NT	NT	NT	NT	NT	NT
Magnesium, dissolved (mg/L)	NA	NT	NT	NT	NT	NT	NT	NT	NT
Mercury, dissolved (mg/L)	0.002	NT	NT	NT	NT	NT	NT	NT	NT
Zinc, dissolved (mg/L)	5	NT	NT	NT	NT	NT	NT	NT	NT
Chemical Oxygen Demand (mg/L)	NA	<10	<10	14	<10	17	<10	<10	<10
Chloride (mg/L)	250	49	38	39	53	40	32	42	44
Nitrogen, Ammonia (mg/L)	NA	<1	<1	<1	<1	<1	<1	<1	<1
Phenols, total (mg/L)	4	NT	<0.1	NT	<0.1	NT	<0.1	NT	<0.1
Total Organic Halogens (TOX) (mg/L)	none	NT	0.053	NT	0.107	NT	0.051	NT	0.023

NT = Not Tested

TABLE-1 Continued: GROUNDWATER ANALYTICAL RESULTS (MW-92-1)

Boring / Well Number	MCL or Action Level	MW-92-1	MW-92-1	MW-92-1	MW-92-1	MW-92-1	MW-92-1	MW-92-1	MW-92-1
Date Sampled	NA	4/28/05	10/27/05						
Elevations - Ground Surface	NA								
- Top of Screen	NA								
- Static Groundwater	NA	22.70	20.44						
1,1,1-Trichloroethane ($\mu\text{g/L}$)	200	NT	NT						
1,1-Dichloroethane ($\mu\text{g/L}$)	NA	NT	NT						
1,2-Dichloroethane ($\mu\text{g/L}$)	5	NT	NT						
1,4-Dichlorobenzene ($\mu\text{g/L}$)	600	NT	NT						
Benzene ($\mu\text{g/L}$)	5	NT	NT						
Carbon Tetrachloride ($\mu\text{g/L}$)	5	NT	NT						
Trichloroethylene ($\mu\text{g/L}$)	5	10.9	8.4						
Arsenic, dissolved (mg/L)	0.05	NT	NT						
Barium, dissolved (mg/L)	2	NT	NT						
Cadmium, dissolved (mg/L)	0.005	NT	NT						
Chromium, dissolved (mg/L)	0.1	NT	NT						
Copper, dissolved (mg/L)	1	NT	NT						
Iron, dissolved (mg/L)	0.3	<0.030	<0.030						
Lead, dissolved (mg/L)	0.015	NT	NT						
Magnesium, dissolved (mg/L)	NA	NT	NT						
Mercury, dissolved (mg/L)	0.002	NT	NT						
Zinc, dissolved (mg/L)	5	NT	NT						
Chemical Oxygen Demand (mg/L)	NA	22	<10						
Chloride (mg/L)	250	60	54						
Nitrogen, Ammonia (mg/L)	NA	<1	<1						
Phenols, total (mg/L)	4	NT	<0.1						
Total Organic Halogens (TOX) (mg/L)	none	NT	0.076						

NT = Not Tested

TABLE-2 Continued: GROUNDWATER ANALYTICAL RESULTS (MW-92-1R)

Boring / Well Number	MCL or Action Level	MW-92-1R	MW-92-1R	MW-92-1R	MW-92-1R (Duplicate)	MW-92-1R	MW-92-1R	MW-92-1R	MW-92-1R
Date Sampled	NA	4/25/00	7/31/00	10/25/00	10/25/00	1/12/01	4/30/01	10/29/01	4/26/02
Elevations - Ground Surface	NA								
- Top of Screen	NA								
- Static Groundwater	NA	19.54	18.53	19.96	19.96	15.17	12.34	13.23	14.42
1,1,1-Trichloroethane ($\mu\text{g/L}$)	200	<1	<1	<1	<1	<2	NT	NT	NT
1,1-Dichloroethane ($\mu\text{g/L}$)	NA	<1	<1	<1	<1	<2	NT	NT	NT
1,2-Dichloroethane ($\mu\text{g/L}$)	5	<0.4	<0.4	<0.4	<0.4	<0.8	NT	NT	NT
1,4-Dichlorobenzene ($\mu\text{g/L}$)	600	<1	<1	<1	<1	<2	NT	NT	NT
Benzene ($\mu\text{g/L}$)	5	<1	<1	<1	<1	<2	NT	NT	NT
Carbon Tetrachloride ($\mu\text{g/L}$)	5	<0.3	<0.3	<0.3	<0.3	<0.6	NT	NT	NT
Trichloroethylene ($\mu\text{g/L}$)	5	<1	<1	<1	<1	<2	<1	<1	<1
Arsenic, dissolved (mg/L)	0.05	<0.001	<0.001	<0.001	<0.001	0.002	NT	NT	NT
Barium, dissolved (mg/L)	2	0.1	0.175	0.25	0.024	0.022	NT	NT	NT
Cadmium, dissolved (mg/L)	0.005	<0.001	<0.001	<0.001	<0.001	<0.001	NT	NT	NT
Chromium, dissolved (mg/L)	0.1	<0.03	<0.03	<0.03	<0.03	<0.03	NT	NT	NT
Copper, dissolved (mg/L)	1	<0.03	<0.03	<0.03	<0.03	<0.03	NT	NT	NT
Iron, dissolved (mg/L)	0.3	<0.03	0.066	0.066	<0.03	<0.03	0.086	0.03	<0.03
Lead, dissolved (mg/L)	0.015	<0.005	<0.005	<0.005	<0.005	<0.005	NT	NT	NT
Magnesium, dissolved (mg/L)	NA	77.3	83.6	83.2	85	72.5	NT	NT	NT
Mercury, dissolved (mg/L)	0.002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	NT	NT	NT
Zinc, dissolved (mg/L)	5	<0.03	<0.03	<0.03	<0.03	<0.03	NT	NT	NT
Chemical Oxygen Demand (mg/L)	NA	12	21	<10	<10	<10	<10	<10	11
Chloride (mg/L)	250	82	132	68	65	47	68	49	67
Nitrogen, Ammonia (mg/L)	NA	<1	<1	<1	<1	<1	<1	<1	<1
Phenols, total (mg/L)	4	<0.1	<0.1	<0.1	<0.1	<0.1	NT	<0.1	NT
Total Organic Halogens (TOX) (mg/L)	none	0.06	NT	0.06	0.05	0.05	NT	0.020	NT

NT = Not Tested.

TABLE-2 Continued: GROUNDWATER ANALYTICAL RESULTS (MW-92-1R)

Boring / Well Number	MCL or Action Level	MW-92-1R	MW-92-1R	MW-92-1R (Duplicate)	MW-92-1R	MW-92-1R	MW-92-1R	MW-92-1R	MW-92-1R
Date Sampled	NA	10/31/02	4/24/03	4/24/03	10/30/03	4/30/04	10/13/04	4/28/05	10/27/05
Elevations - Ground Surface	NA								
- Top of Screen	NA								
- Static Groundwater	NA	13.27	14.15	14.15	13.65	12.38	11.65	16.30	13.85
1,1,1-Trichloroethane ($\mu\text{g/L}$)	200	NT	NT	NT	NT	NT	NT	NT	NT
1,1-Dichloroethane ($\mu\text{g/L}$)	NA	NT	NT	NT	NT	NT	NT	NT	NT
1,2-Dichloroethane ($\mu\text{g/L}$)	5	NT	NT	NT	NT	NT	NT	NT	NT
1,4-Dichlorobenzene ($\mu\text{g/L}$)	600	NT	NT	NT	NT	NT	NT	NT	NT
Benzene ($\mu\text{g/L}$)	5	NT	NT	NT	NT	NT	NT	NT	NT
Carbon Tetrachloride ($\mu\text{g/L}$)	5	NT	NT	NT	NT	NT	NT	NT	NT
Trichloroethylene ($\mu\text{g/L}$)	5	<1	<1	<1	<1	<0.3	<0.3	<0.3	<0.3
Arsenic, dissolved (mg/L)	0.05	NT	NT	NT	NT	NT	NT	NT	NT
Barium, dissolved (mg/L)	2	NT	NT	NT	NT	NT	NT	NT	NT
Cadmium, dissolved (mg/L)	0.005	NT	NT	NT	NT	NT	NT	NT	NT
Chromium, dissolved (mg/L)	0.1	NT	NT	NT	NT	NT	NT	NT	NT
Copper, dissolved (mg/L)	1	NT	NT	NT	NT	NT	NT	NT	NT
Iron, dissolved (mg/L)	0.3	0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Lead, dissolved (mg/L)	0.015	NT	NT	NT	NT	NT	NT	NT	NT
Magnesium, dissolved (mg/L)	NA	NT	NT	NT	NT	NT	NT	NT	NT
Mercury, dissolved (mg/L)	0.002	NT	NT	NT	NT	NT	NT	NT	NT
Zinc, dissolved (mg/L)	5	NT	NT	NT	NT	NT	NT	NT	NT
Chemical Oxygen Demand (mg/L)	NA	<10	<10	<10	<10	<10	<10	<10	<10
Chloride (mg/L)	250	79	89	96	68	59	53	103	83
Nitrogen, Ammonia (mg/L)	NA	<1	<1	<1	<1	<1	<1	<1	<1
Phenols, total (mg/L)	4	<0.1	NT	NT	<0.1	NT	<0.1	NT	<0.1
Total Organic Halogens (TOX) (mg/L)	none	0.028	NT	NT	0.026	NT	0.023	NT	0.044

NT = Not Tested.

TABLE-3: GROUNDWATER ANALYTICAL RESULTS (MW-92-2)

Boring / Well Number	MCL or Action Level	MW-92-2	MW-92-2	Duplicate (MW-92-2)	MW-92-2	MW-92-2	MW-92-2	MW-92-2	MW-92-2
Date Sampled	NA	4/2/97	7/28/97	7/28/97	10/20/97	1/28/98	9/10/98	3/23/99	4/25/00
Elevations - Ground Surface	NA								
- Top of Screen	NA								
- Static Groundwater	NA	18.80	17.07	17.07	19.57	19.98	16.24	19.76	22.20
1,1,1-Trichloroethane ($\mu\text{g/L}$)	200	<1	<1	<1	<1	<1	NT	<1	NT
1,1-Dichloroethane ($\mu\text{g/L}$)	NA	<1	<1	<1	<1	<1	NT	<1	NT
1,2-Dichloroethane ($\mu\text{g/L}$)	5	<0.4	<0.4	<0.4	<0.4	<0.4	NT	<0.4	NT
1,4-Dichlorobenzene ($\mu\text{g/L}$)	600	<1	<1	<1	<1	<1	NT	<1	NT
Benzene ($\mu\text{g/L}$)	5	<1	<1	<1	<1	<1	NT	<1	NT
Carbon Tetrachloride ($\mu\text{g/L}$)	5	<0.3	<0.3	<0.3	<0.3	<0.3	NT	<0.3	NT
Trichloroethylene ($\mu\text{g/L}$)	5	<1	<1	<1	<1	<1	NT	<1	5.3
Arsenic, dissolved (mg/L)	0.05	<0.001	<0.001	<0.001	<0.001	0.001	NT	<0.001	NT
Barium, dissolved (mg/L)	2	0.139	0.101	0.1	0.113	0.145	NT	0.112	NT
Cadmium, dissolved (mg/L)	0.005	0.002	0.001	0.001	<0.001	<0.001	NT	<0.001	NT
Chromium, dissolved (mg/L)	0.1	<0.03	<0.03	<0.03	<0.03	<0.03	NT	<0.03	NT
Copper, dissolved (mg/L)	1	<0.03	<0.03	<0.03	<0.03	<0.03	NT	<0.03	NT
Iron, dissolved (mg/L)	0.3	8.72	0.053	0.122	2.76	9.7	8.35	8.37	0.56
Lead, dissolved (mg/L)	0.015	<0.005	<0.005	<0.005	<0.005	<0.005	NT	<0.005	NT
Magnesium, dissolved (mg/L)	NA	48.5	46.5	48.1	46.8	49	NT	41.6	NT
Mercury, dissolved (mg/L)	0.002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	NT	<0.0005	NT
Zinc, dissolved (mg/L)	5	<0.03	<0.03	<0.047	0.03	<0.03	NT	<0.03	NT
Chemical Oxygen Demand (mg/L)	NA	<10	<10	<10	<10	<10	<10	<10	<10
Chloride (mg/L)	250	79	77	76	68	82	81.2	80	27
Nitrogen, Ammonia (mg/L)	NA	<1	<1	<1	<1	<1	NT	<1	<1
Phenols, total (mg/L)	4	NT	NT	NT	NT	<0.1	NT	<0.1	NT
Total Organic Halogens (TOX) mg/L	none	NT	NT	NT	NT	<0.01	NT	0.01	NT

NT = Not Tested

TABLE-3 Continued: GROUNDWATER ANALYTICAL RESULTS (MW-92-2)

Boring / Well Number	MCL or Action Level	MW-92-2	MW-92-2	MW-92-2	MW-92-2	MW-92-2	MW-92-2	MW-92-2	MW-92-2
Date Sampled	NA	7/31/00	10/25/00	4/30/01	10/29/01	4/26/02	10/31/02	4/24/03	10/30/03
Elevations - Ground Surface	NA								
- Top of Screen	NA								
- Static Groundwater	NA	20.49	21.75	19.71	20.25	21.51	20.51	21.37	20.69
1,1,1-Trichloroethane ($\mu\text{g/L}$)	200	NT	NT	NT	NT	NT	NT	NT	NT
1,1-Dichloroethane ($\mu\text{g/L}$)	NA	NT	NT	NT	NT	NT	NT	NT	NT
1,2-Dichloroethane ($\mu\text{g/L}$)	5	NT	NT	NT	NT	NT	NT	NT	NT
1,4-Dichlorobenzene ($\mu\text{g/L}$)	600	NT	NT	NT	NT	NT	NT	NT	NT
Benzene ($\mu\text{g/L}$)	5	NT	NT	NT	NT	NT	NT	NT	NT
Carbon Tetrachloride ($\mu\text{g/L}$)	5	NT	NT	NT	NT	NT	NT	NT	NT
Trichloroethylene ($\mu\text{g/L}$)	5	3.8	4.6	<1	<1	<1	<1	6.9	<1
Arsenic, dissolved (mg/L)	0.05	NT	NT	NT	NT	NT	NT	NT	NT
Barium, dissolved (mg/L)	2	NT	NT	NT	NT	NT	NT	NT	NT
Cadmium, dissolved (mg/L)	0.005	NT	NT	NT	NT	NT	NT	NT	NT
Chromium, dissolved (mg/L)	0.1	NT	NT	NT	NT	NT	NT	NT	NT
Copper, dissolved (mg/L)	1	NT	NT	NT	NT	NT	NT	NT	NT
Iron, dissolved (mg/L)	0.3	NT	<0.03	7.06	8.06	7.62	6.33	<0.03	6.29
Lead, dissolved (mg/L)	0.015	NT	NT	NT	NT	NT	NT	NT	NT
Magnesium, dissolved (mg/L)	NA	NT	NT	NT	NT	NT	NT	NT	NT
Mercury, dissolved (mg/L)	0.002	NT	NT	NT	NT	NT	NT	NT	NT
Zinc, dissolved (mg/L)	5	NT	NT	NT	NT	NT	NT	NT	NT
Chemical Oxygen Demand (mg/L)	NA	NT	<10	<10	<10	<10	11	18	<10
Chloride (mg/L)	250	NT	51	68	69	62	71	36	70
Nitrogen, Ammonia (mg/L)	NA	NT	<1	<1	<1	<1	<1	<1	<1
Phenols, total (mg/L)	4	NT	<0.1	NT	<0.1	NT	<0.1	NT	<0.1
Total Organic Halogens (TOX) (mg/L)	none	NT	0.03	NT	0.020	NT	0.019	NT	<0.010

NT = Not Tested

TABLE-3 Continued: GROUNDWATER ANALYTICAL RESULTS (MW-92-2)

Boring / Well Number	MCL or Action Level	MW-92-2	MW-92-2	MW-92-2	MW-92-2 Duplicate	MW-92-2	MW-92-2	MW-92-2	MW-92-2
Date Sampled	NA	4/30/04	10/13/04	4/28/05	4/28/05	10/27/05			
Elevations - Ground Surface	NA								
- Top of Screen	NA								
- Static Groundwater	NA	19.63	18.78	23.37	23.37	21.48			
1,1,1-Trichloroethane ($\mu\text{g/L}$)	200	NT	NT	NT	NT	NT			
1,1-Dichloroethane ($\mu\text{g/L}$)	NA	NT	NT	NT	NT	NT			
1,2-Dichloroethane ($\mu\text{g/L}$)	5	NT	NT	NT	NT	NT			
1,4-Dichlorobenzene ($\mu\text{g/L}$)	600	NT	NT	NT	NT	NT			
Benzene ($\mu\text{g/L}$)	5	NT	NT	NT	NT	NT			
Carbon Tetrachloride ($\mu\text{g/L}$)	5	NT	NT	NT	NT	NT			
Trichloroethylene ($\mu\text{g/L}$)	5	<0.3	0.8	3.2	3.2	<0.3			
Arsenic, dissolved (mg/L)	0.05	NT	NT	NT	NT	NT			
Barium, dissolved (mg/L)	2	NT	NT	NT	NT	NT			
Cadmium, dissolved (mg/L)	0.005	NT	NT	NT	NT	NT			
Chromium, dissolved (mg/L)	0.1	NT	NT	NT	NT	NT			
Copper, dissolved (mg/L)	1	NT	NT	NT	NT	NT			
Iron, dissolved (mg/L)	0.3	7.67	7.21	4.21	3.82	7.05			
Lead, dissolved (mg/L)	0.015	NT	NT	NT	NT	NT			
Magnesium, dissolved (mg/L)	NA	NT	NT	NT	NT	NT			
Mercury, dissolved (mg/L)	0.002	NT	NT	NT	NT	NT			
Zinc, dissolved (mg/L)	5	NT	NT	NT	NT	NT			
Chemical Oxygen Demand (mg/L)	NA	17	<10	<10	16	14			
Chloride (mg/L)	250	73	72	40	39	50			
Nitrogen, Ammonia (mg/L)	NA	<1	<1	<1	<1	<1			
Phenols, total (mg/L)	4	NT	<0.1	NT	NT	<0.1			
Total Organic Halogens (TOX) (mg/L)	none	NT	0.020	NT	NT	0.037			

NT = Not Tested

TABLE-4: GROUNDWATER ANALYTICAL RESULTS (MW-92-3)

Boring / Well Number	MCL or Action Level	MW-92-3	MW-92-3	MW-92-3	MW-92-3	MW-92-3 Duplicate	MW-92-3	MW-92-3	MW-92-3
Date Sampled	NA	4/25/00	7/31/00	10/25/00	1/12/01	1/12/01	4/30/01	10/29/01	4/26/02
Elevations - Ground Surface	NA								
- Top of Screen	NA								
- Static Groundwater	NA	20.10	18.03	23.45	23.66	23.66	20.00	22.04	22.89
1,1,1-Trichloroethane ($\mu\text{g/L}$)	200	<1	<1	<1	<1	<1	NT	NT	NT
1,1-Dichloroethane ($\mu\text{g/L}$)	NA	<1	<1	<1	<1	<1	NT	NT	NT
1,2-Dichloroethane ($\mu\text{g/L}$)	5	<0.4	<0.4	<0.4	<0.4	<0.4	NT	NT	NT
1,4-Dichlorobenzene ($\mu\text{g/L}$)	600	<1	<1	<1	<1	<1	NT	NT	NT
Benzene ($\mu\text{g/L}$)	5	<1	<1	<1	<1	<1	NT	NT	NT
Carbon Tetrachloride ($\mu\text{g/L}$)	5	<0.3	<0.3	<0.3	<0.3	<0.3	NT	NT	NT
Trichloroethylene ($\mu\text{g/L}$)	5	<1	<1	<1	<1	<1	<1	<1	<1
Arsenic, dissolved (mg/L)	0.05	<0.001	<0.001	<0.001	0.001	0.001	NT	NT	NT
Barium, dissolved (mg/L)	2	0.087	0.111	0.081	0.054	0.052	NT	NT	NT
Cadmium, dissolved (mg/L)	0.005	<0.001	<0.001	<0.001	<0.001	<0.001	NT	NT	NT
Chromium, dissolved (mg/L)	0.1	<0.03	<0.03	<0.03	<0.03	<0.03	NT	NT	NT
Copper, dissolved (mg/L)	1	<0.03	<0.03	<0.03	<0.03	<0.03	NT	NT	NT
Iron, dissolved (mg/L)	0.3	0.026	0.026	<0.03	<0.03	0.046	<0.03	<0.03	<0.03
Lead, dissolved (mg/L)	0.015	<0.005	<0.005	<0.005	<0.005	<0.005	NT	NT	NT
Magnesium, dissolved (mg/L)	NA	37.8	35.2	30.7	33.3	32.8	NT	NT	NT
Mercury, dissolved (mg/L)	0.002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	NT	NT	NT
Zinc, dissolved (mg/L)	5	<0.03	<0.03	<0.03	<0.03	<0.03	NT	NT	NT
Chemical Oxygen Demand (mg/L)	NA	<10	20	<10	<10	<10	<10	<10	11
Chloride (mg/L)	250	61	11	41	50	45	26	40	55
Nitrogen, Ammonia (mg/L)	NA	<1	<1	<1	<1	<1	<1	<1	<1
Phenols, total (mg/L)	4	<0.1	<0.1	<0.1	<0.1	<0.1	NT	<0.1	NT
Total Organic Halogens (TOX) (mg/L)	none	0.06	NT	0.04	0.03	0.03	NT	0.017	NT

NT = Not Tested

TABLE-4 Continued: GROUNDWATER ANALYTICAL RESULTS (MW-92-3)

Boring / Well Number	MCL or Action Level	MW-92-3	MW-92-3	MW-92-3	MW-92-3 Duplicate	MW-92-3	MW-92-3	MW-92-3	MW-92-3
Date Sampled	NA	10/31/02	4/24/03	10/30/03	10/30/03	4/30/04	10/13/04	4/28/05	10/27/05
Elevations - Ground Surface	NA							**	
- Top of Screen	NA								
- Static Groundwater	NA	21.89	22.54	22.29	22.29	20.77	20.27	25.35	22.38
1,1,1-Trichloroethane ($\mu\text{g/L}$)	200	NT	NT	NT	NT	NT	NT		NT
1,1-Dichloroethane ($\mu\text{g/L}$)	NA	NT	NT	NT	NT	NT	NT		NT
1,2-Dichloroethane ($\mu\text{g/L}$)	5	NT	NT	NT	NT	NT	NT		NT
1,4-Dichlorobenzene ($\mu\text{g/L}$)	600	NT	NT	NT	NT	NT	NT		NT
Benzene ($\mu\text{g/L}$)	5	NT	NT	NT	NT	NT	NT		NT
Carbon Tetrachloride ($\mu\text{g/L}$)	5	NT	NT	NT	NT	NT	NT		NT
Trichloroethylene ($\mu\text{g/L}$)	5	<1	<1	<1	<1	0.3	<0.3		0.4
Arsenic, dissolved (mg/L)	0.05	NT	NT	NT	NT	NT	NT		NT
Barium, dissolved (mg/L)	2	NT	NT	NT	NT	NT	NT		NT
Cadmium, dissolved (mg/L)	0.005	NT	NT	NT	NT	NT	NT		NT
Chromium, dissolved (mg/L)	0.1	NT	NT	NT	NT	NT	NT		NT
Copper, dissolved (mg/L)	1	NT	NT	NT	NT	NT	NT		NT
Iron, dissolved (mg/L)	0.3	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03		<0.03
Lead, dissolved (mg/L)	0.015	NT	NT	NT	NT	NT	NT		NT
Magnesium, dissolved (mg/L)	NA	NT	NT	NT	NT	NT	NT		NT
Mercury, dissolved (mg/L)	0.002	NT	NT	NT	NT	NT	NT		NT
Zinc, dissolved (mg/L)	5	NT	NT	NT	NT	NT	NT		NT
Chemical Oxygen Demand (mg/L)	NA	14	<10	22	<10	<10	11		12
Chloride (mg/L)	250	45	58	44	39	39	24		49
Nitrogen, Ammonia (mg/L)	NA	<1	<1	<1	<1	<1	<1		<1
Phenols, total (mg/L)	4	<0.1	NT	<0.1	<0.1	NT	<0.1		<0.1
Total Organic Halogens (TOX) (mg/L)	none	0.042	NT	0.017	0.015	NT	0.013		0.099

NT = Not Tested. **Not Sampled, not enough water.

TABLE-5: GROUNDWATER ANALYTICAL RESULTS (MW-92-4)

Boring / Well Number	MCL or Action Level	MW-92-4	MW-92-4	MW-92-4	MW-92-4	Mw-92-4	MW-92-4	MW-92-4 (Duplicate)	MW-92-4
Date Sampled	NA	4/2/97	7/28/97	10/20/97	1/28/98	9/10/98	3/23/99	3/23/99	4/25/00
Elevations - Ground Surface	NA								
- Top of Screen	NA								
- Static Groundwater	NA	21.28	20.31	23.30	23.47	20.24	23.00	23.00	25.73
1,1,1-Trichloroethane ($\mu\text{g/L}$)	200	<1	<1	<1	<1	NT	<1	<1	NT
1,1-Dichloroethane ($\mu\text{g/L}$)	NA	<1	<1	<1	<1	NT	<1	<1	NT
1,2-Dichloroethane ($\mu\text{g/L}$)	5	<0.4	<0.4	<0.4	<0.4	NT	<0.4	<0.4	NT
1,4-Dichlorobenzene ($\mu\text{g/L}$)	600	<1	<1	<1	<1	NT	<1	<1	NT
Benzene ($\mu\text{g/L}$)	5	<1	<1	<1	<1	NT	<1	<1	NT
Carbon Tetrachloride ($\mu\text{g/L}$)	5	<0.3	<0.3	<0.3	<0.3	NT	<0.3	<0.3	NT
Trichloroethylene ($\mu\text{g/L}$)	5	<1	<1	<1	<1	NT	<1	<1	<1
Arsenic, dissolved (mg/L)	0.05	<0.001	<0.001	<0.001	0.001	NT	<0.001	<0.001	NT
Barium, dissolved (mg/L)	2	0.042	0.035	0.037	0.04	NT	0.05	0.053	NT
Cadmium, dissolved (mg/L)	0.005	<0.001	<0.001	<0.001	<0.001	NT	<0.001	<0.001	NT
Chromium, dissolved (mg/L)	0.1	<0.03	<0.03	<0.03	<0.03	NT	<0.03	<0.03	NT
Copper, dissolved (mg/L)	1	<0.03	<0.03	<0.03	<0.03	NT	<0.03	<0.03	NT
Iron, dissolved (mg/L)	0.3	<0.03	<0.03	0.046	0.072	0.317	<0.03	<0.03	0.106
Lead, dissolved (mg/L)	0.015	<0.005	<0.005	<0.005	<0.005	NT	<0.005	<0.005	NT
Magnesium, dissolved (mg/L)	NA	34.4	31.9	31.5	29	NT	25.7	25.7	NT
Mercury, dissolved (mg/L)	0.002	<0.0005	<0.0005	<0.0005	<0.0005	NT	<0.0005	<0.0005	NT
Zinc, dissolved (mg/L)	5	0.032	0.046	<0.03	<0.03	NT	<0.03	<0.03	NT
Chemical Oxygen Demand (mg/L)	NA	14	<10	<10	23	14	<10	<10	<10
Chloride (mg/L)	250	53	47	58	80	80.1	52	48	40
Nitrogen, Ammonia (mg/L)	NA	<1	<1	<1	<1	<1	<1	<1	<1
Phenols, total (mg/L)	4	NT	NT	NT	<0.1	NT	<0.1	<0.1	NT
Total Organic Halogens (TOX) (mg/L)	none	NT	NT	NT	0.06	NT	0.11	0.06	NT

NT = Not Tested

TABLE-5 Continued: GROUNDWATER ANALYTICAL RESULTS (MW-92-4)

Boring / Well Number	MCL or Action Level	MW-92-4	MW-92-4	MW-92-4	MW-92-4	Mw-92-4	MW-92-4	MW-92-4	MW-92-4
Date Sampled	NA	10/25/00	4/30/01	10/29/01	4/26/02	10/31/02	4/24/03	10/30/03	4/30/04
Elevations - Ground Surface	NA								
- Top of Screen	NA								
- Static Groundwater	NA	25.32	21.70	23.93	24.76	23.80	24.32	24.13	22.61
1,1,1-Trichloroethane ($\mu\text{g/L}$)	200	NT	NT	NT	NT	NT	NT	NT	NT
1,1-Dichloroethane ($\mu\text{g/L}$)	NA	NT	NT	NT	NT	NT	NT	NT	NT
1,2-Dichloroethane ($\mu\text{g/L}$)	5	NT	NT	NT	NT	NT	NT	NT	NT
1,4-Dichlorobenzene ($\mu\text{g/L}$)	600	NT	NT	NT	NT	NT	NT	NT	NT
Benzene ($\mu\text{g/L}$)	5	NT	NT	NT	NT	NT	NT	NT	NT
Carbon Tetrachloride ($\mu\text{g/L}$)	5	NT	NT	NT	NT	NT	NT	NT	NT
Trichloroethylene ($\mu\text{g/L}$)	5	<1	<1	<1	<1	<1	<1	<1	<0.3
Arsenic, dissolved (mg/L)	0.05	NT	NT	NT	NT	NT	NT	NT	NT
Barium, dissolved (mg/L)	2	NT	NT	NT	NT	NT	NT	NT	NT
Cadmium, dissolved (mg/L)	0.005	NT	NT	NT	NT	NT	NT	NT	NT
Chromium, dissolved (mg/L)	0.1	NT	NT	NT	NT	NT	NT	NT	NT
Copper, dissolved (mg/L)	1	NT	NT	NT	NT	NT	NT	NT	NT
Iron, dissolved (mg/L)	0.3	<0.03	0.054	0.242	0.049	<0.03	<0.03	<0.03	0.041
Lead, dissolved (mg/L)	0.015	NT	NT	NT	NT	NT	NT	NT	NT
Magnesium, dissolved (mg/L)	NA	NT	NT	NT	NT	NT	NT	NT	NT
Mercury, dissolved (mg/L)	0.002	NT	NT	NT	NT	NT	NT	NT	NT
Zinc, dissolved (mg/L)	5	NT	NT	NT	NT	NT	NT	NT	NT
Chemical Oxygen Demand (mg/L)	NA	<10	<10	<10	<10	20	24	24	15
Chloride (mg/L)	250	58	49	63	75	102	64	117	61
Nitrogen, Ammonia (mg/L)	NA	<1	<1	<1	<1	<1	<1	<1	<1
Phenols, total (mg/L)	4	<0.1	NT	<0.1	NT	<0.1	NT	<0.1	NT
Total Organic Halogens (TOX) (mg/L)	none	0.07	NT	<0.01	NT	0.024	NT	<0.05	NT

NT = Not Tested

TABLE-5 Continued: GROUNDWATER ANALYTICAL RESULTS (MW-92-4)

Boring / Well Number	MCL or Action Level	MW-92-4	MW-92-4	MW-92-4	MW-92-4	Mw-92-4	MW-92-4	MW-92-4	MW-92-4
Date Sampled	NA	10/13/04	4/28/05	10/27/05					
Elevations - Ground Surface	NA								
- Top of Screen	NA								
- Static Groundwater	NA	22.10	27.31	24.22					
1,1,1-Trichloroethane ($\mu\text{g/L}$)	200	NT	NT	NT					
1,1-Dichloroethane ($\mu\text{g/L}$)	NA	NT	NT	NT					
1,2-Dichloroethane ($\mu\text{g/L}$)	5	NT	NT	NT					
1,4-Dichlorobenzene ($\mu\text{g/L}$)	600	NT	NT	NT					
Benzene ($\mu\text{g/L}$)	5	NT	NT	NT					
Carbon Tetrachloride ($\mu\text{g/L}$)	5	NT	NT	NT					
Trichloroethylene ($\mu\text{g/L}$)	5	<0.3	<0.3	<0.3					
Arsenic, dissolved (mg/L)	0.05	NT	NT	NT					
Barium, dissolved (mg/L)	2	NT	NT	NT					
Cadmium, dissolved (mg/L)	0.005	NT	NT	NT					
Chromium, dissolved (mg/L)	0.1	NT	NT	NT					
Copper, dissolved (mg/L)	1	NT	NT	NT					
Iron, dissolved (mg/L)	0.3	<0.03	<0.03	<0.03					
Lead, dissolved (mg/L)	0.015	NT	NT	NT					
Magnesium, dissolved (mg/L)	NA	NT	NT	NT					
Mercury, dissolved (mg/L)	0.002	NT	NT	NT					
Zinc, dissolved (mg/L)	5	NT	NT	NT					
Chemical Oxygen Demand (mg/L)	NA	<10	<10	<10					
Chloride (mg/L)	250	111	55	106					
Nitrogen, Ammonia (mg/L)	NA	<1	<1	<1					
Phenols, total (mg/L)	4	<0.1	NT	<0.1					
Total Organic Halogens (TOX) (mg/L)	none	0.040	NT	0.049					

NT = Not Tested

TABLE-6: GROUNDWATER ANALYTICAL RESULTS (MW-92-5)

Boring / Well Number	MCL or Action Level	MW-92-5	MW-92-5	MW-92-5	Duplicate MW-92-5	MW-92-5	MW-92-5	MW-92-5	MW-92-5
Date Sampled	NA	4/2/97	7/28/97	10/20/97	10/20/97	1/28/98	9/10/98	3/23/99	4/25/00
Elevations - Ground Surface	NA								
- Top of Screen	NA								
- Static Groundwater	NA	21.48	20.45	23.40	23.40	23.68	20.46	23.17	25.96
1,1,1-Trichloroethane ($\mu\text{g/L}$)	200	<1	<1	<1	<1	<1	NT	<1	NT
1,1-Dichloroethane ($\mu\text{g/L}$)	NA	<1	<1	<1	<1	<1	NT	<1	NT
1,2-Dichloroethane ($\mu\text{g/L}$)	5	<0.4	<0.4	<0.4	<0.4	<0.4	NT	<0.4	NT
1,4-Dichlorobenzene ($\mu\text{g/L}$)	600	<1	<1	<1	<1	<1	NT	<1	NT
Benzene ($\mu\text{g/L}$)	5	<1	<1	<1	<1	<1	NT	<1	NT
Carbon Tetrachloride ($\mu\text{g/L}$)	5	<0.3	<0.3	<0.3	<0.3	<0.3	NT	<0.3	NT
Trichloroethylene ($\mu\text{g/L}$)	5	<1	<1	<1	<1	<1	NT	<1	<1
Arsenic, dissolved (mg/L)	0.05	<0.001	<0.001	<0.001	<0.001	<0.001	NT	<0.001	NT
Barium, dissolved (mg/L)	2	0.09	0.073	0.09	0.09	0.104	NT	0.19	NT
Cadmium, dissolved (mg/L)	0.005	<0.001	0.002	<0.001	<0.001	<0.001	NT	<0.001	NT
Chromium, dissolved (mg/L)	0.1	<0.03	<0.03	<0.03	<0.03	<0.03	NT	<0.03	NT
Copper, dissolved (mg/L)	1	<0.03	<0.03	<0.03	<0.03	<0.03	NT	<0.03	NT
Iron, dissolved (mg/L)	0.3	8.14	<0.03	6.65	6.54	9.06	8.5	7.86	3.2
Lead, dissolved (mg/L)	0.015	<0.005	<0.005	<0.005	<0.005	<0.005	NT	<0.005	NT
Magnesium, dissolved (mg/L)	NA	49	47.6	47.6	46.8	50	NT	47.4	NT
Mercury, dissolved (mg/L)	0.002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	NT	<0.0005	NT
Zinc, dissolved (mg/L)	5	<0.03	0.083	<0.03	0.032	<0.03	NT	<0.03	NT
Chemical Oxygen Demand (mg/L)	NA	<10	<10	<10	<10	<10	<10	<10	<10
Chloride (mg/L)	250	69	75	78	78	85	75	64	58
Nitrogen, Ammonia (mg/L)	NA	<1	<1	<1	<1	<1	<1	<1	<1
Phenols, total (mg/L)	4	NT	NT	NT	NT	<0.1	NT	<0.1	NT
Total Organic Halogens (TOX) (mg/L)	none	NT	NT	NT	NT	<0.01	NT	0.02	NT

NT = Not Tested

TABLE-6 Continued: GROUNDWATER ANALYTICAL RESULTS (MW-92-5)

Boring / Well Number	MCL or Action Level	MW-92-5	MW-92-5	MW-92-5	MW-92-5	MW-92-5	MW-92-5	MW-92-5	MW-92-5
Date Sampled	NA	10/25/00	4/30/01	10/29/01	4/26/02	10/31/02	4/24/03	10/30/03	4/30/04
Elevations - Ground Surface	NA								
- Top of Screen	NA								
- Static Groundwater	NA	25.55	21.94	24.18	25.00	24.03	24.63	24.39	22.79
1,1,1-Trichloroethane ($\mu\text{g/L}$)	200	NT	NT	NT	NT	NT	NT	NT	NT
1,1-Dichloroethane ($\mu\text{g/L}$)	NA	NT	NT	NT	NT	NT	NT	NT	NT
1,2-Dichloroethane ($\mu\text{g/L}$)	5	NT	NT	NT	NT	NT	NT	NT	NT
1,4-Dichlorobenzene ($\mu\text{g/L}$)	600	NT	NT	NT	NT	NT	NT	NT	NT
Benzene ($\mu\text{g/L}$)	5	NT	NT	NT	NT	NT	NT	NT	NT
Carbon Tetrachloride ($\mu\text{g/L}$)	5	NT	NT	NT	NT	NT	NT	NT	NT
Trichloroethylene ($\mu\text{g/L}$)	5	<1	<1	<1	<1	<1	<1	<1	<0.3
Arsenic, dissolved (mg/L)	0.05	NT	NT	NT	NT	NT	NT	NT	NT
Barium, dissolved (mg/L)	2	NT	NT	NT	NT	NT	NT	NT	NT
Cadmium, dissolved (mg/L)	0.005	NT	NT	NT	NT	NT	NT	NT	NT
Chromium, dissolved (mg/L)	0.1	NT	NT	NT	NT	NT	NT	NT	NT
Copper, dissolved (mg/L)	1	NT	NT	NT	NT	NT	NT	NT	NT
Iron, dissolved (mg/L)	0.3	7.32	7.62	7.72	7.13	3.10	0.824	<0.03	5.95
Lead, dissolved (mg/L)	0.015	NT	NT	NT	NT	NT	NT	NT	NT
Magnesium, dissolved (mg/L)	NA	NT	NT	NT	NT	NT	NT	NT	NT
Mercury, dissolved (mg/L)	0.002	NT	NT	NT	NT	NT	NT	NT	NT
Zinc, dissolved (mg/L)	5	NT	NT	NT	NT	NT	NT	NT	NT
Chemical Oxygen Demand (mg/L)	NA	<10	<10	<10	<10	11	<10	<10	16
Chloride (mg/L)	250	63	68	74	61	69	71	66	68
Nitrogen, Ammonia (mg/L)	NA	<1	<1	<1	<1	<1	<1	<1	<1
Phenols, total (mg/L)	4	<0.1	NT	<0.1	NT	<0.1	NT	<0.1	NT
Total Organic Halogens (TOX) (mg/L)	none	0.02	NT	<0.010	NT	0.021	NT	0.108	NT

NT = Not Tested

TABLE-6 Continued: GROUNDWATER ANALYTICAL RESULTS (MW-92-5)

Boring / Well Number	MCL or Action Level	MW-92-5	MW-92-5	MW-92-5	MW-92-5	MW-92-5	MW-92-5	MW-92-5	MW-92-5
Date Sampled	NA	10/13/04	4/28/05	10/27/05					
Elevations - Ground Surface	NA								
- Top of Screen	NA								
- Static Groundwater	NA	22.34	27.36	24.48					
1,1,1-Trichloroethane ($\mu\text{g/L}$)	200	NT	NT	NT					
1,1-Dichloroethane ($\mu\text{g/L}$)	NA	NT	NT	NT					
1,2-Dichloroethane ($\mu\text{g/L}$)	5	NT	NT	NT					
1,4-Dichlorobenzene ($\mu\text{g/L}$)	600	NT	NT	NT					
Benzene ($\mu\text{g/L}$)	5	NT	NT	NT					
Carbon Tetrachloride ($\mu\text{g/L}$)	5	NT	NT	NT					
Trichloroethylene ($\mu\text{g/L}$)	5	<0.3	<0.3	<0.3					
Arsenic, dissolved (mg/L)	0.05	NT	NT	NT					
Barium, dissolved (mg/L)	2	NT	NT	NT					
Cadmium, dissolved (mg/L)	0.005	NT	NT	NT					
Chromium, dissolved (mg/L)	0.1	NT	NT	NT					
Copper, dissolved (mg/L)	1	NT	NT	NT					
Iron, dissolved (mg/L)	0.3	<0.03	5.78	6.07					
Lead, dissolved (mg/L)	0.015	NT	NT	NT					
Magnesium, dissolved (mg/L)	NA	NT	NT	NT					
Mercury, dissolved (mg/L)	0.002	NT	NT	NT					
Zinc, dissolved (mg/L)	5	NT	NT	NT					
Chemical Oxygen Demand (mg/L)	NA	<10	15	16					
Chloride (mg/L)	250	68	56	52					
Nitrogen, Ammonia (mg/L)	NA	<1	<1	<1					
Phenols, total (mg/L)	4	<0.1	NT	<0.1					
Total Organic Halogens (TOX) (mg/L)	none	0.019	NT	0.041					

NT = Not Tested

TABLE-7: GROUNDWATER ANALYTICAL DATA (MW-92-6)

Boring / Well Number	MCL or Action Level	MW-92-6	MW-92-6	MW-92-6	MW-92-6	MW-92-6	MW-92-6	MW-92-6	MW-92-6
Date Sampled	NA	4/2/97	7/28/97	10/20/97	1/28/98	9/10/98	3/23/99	4/25/00	10/25/00
Elevations - Ground Surface	NA								
- Top of Screen	NA								
- Static Groundwater	NA	20.22	19.12	21.05	22.30	17.61	21.74	27.96	27.47
1,1,1-Trichloroethane ($\mu\text{g/L}$)	200	<1	<1	<1	<1	NT	<1	NT	NT
1,1-Dichloroethane ($\mu\text{g/L}$)	NA	<1	<1	<1	<1	NT	<1	NT	NT
1,2-Dichloroethane ($\mu\text{g/L}$)	5	<0.4	<0.4	<0.4	<0.4	NT	<0.4	NT	NT
1,4-Dichlorobenzene ($\mu\text{g/L}$)	600	<1	<1	<1	<1	NT	<1	NT	NT
Benzene ($\mu\text{g/L}$)	5	<1	<1	<1	<1	NT	<1	NT	NT
Carbon Tetrachloride ($\mu\text{g/L}$)	5	<0.3	<0.3	<0.3	<0.3	NT	<0.3	NT	NT
Trichloroethylene ($\mu\text{g/L}$)	5	<1	<1	<1	<1	NT	<1	<1	<1
Arsenic, dissolved (mg/L)	0.05	0.001	0.009	0.014	0.005	NT	<0.001	NT	NT
Barium, dissolved (mg/L)	2	0.075	0.034	0.03	0.069	NT	0.098	NT	NT
Cadmium, dissolved (mg/L)	0.005	<0.001	<0.001	<0.001	<0.001	NT	<0.001	NT	NT
Chromium, dissolved (mg/L)	0.1	<0.03	<0.03	<0.03	<0.03	NT	<0.03	NT	NT
Copper, dissolved (mg/L)	1	<0.03	<0.03	<0.03	<0.03	NT	<0.03	NT	NT
Iron, dissolved (mg/L)	0.3	<0.03	0.179	0.235	0.113	4.12	<0.03	0.051	0.358
Lead, dissolved (mg/L)	0.015	<0.005	<0.005	<0.005	<0.005	NT	<0.005	NT	NT
Magnesium, dissolved (mg/L)	NA	30.7	14	2.23	7.3	NT	27.9	NT	NT
Mercury, dissolved (mg/L)	0.002	<0.0005	<0.0005	<0.0005	<0.0005	NT	<0.0005	NT	NT
Zinc, dissolved (mg/L)	5	<0.03	0.031	<0.03	<0.03	NT	<0.03	NT	NT
Chemical Oxygen Demand (mg/L)	NA	15	<10	36	26	<10	19.4	<10	22
Chloride (mg/L)	250	91	88	155	142	54	100	120	119
Nitrogen, Ammonia (mg/L)	NA	<1	<1	3.2	1.1	<1	<1	<1	<1
Phenols, total (mg/L)	4	NT	NT	NT	<0.1	NT	<0.1	NT	<0.1
Total Organic Halogens (TOX) (mg/L)	none	NT	NT	NT	0.02	NT	<0.01	NT	0.04

NT = Not Tested

TABLE-7 Continued: GROUNDWATER ANALYTICAL DATA (MW-92-6)

Boring / Well Number	MCL or Action Level	MW-92-6	MW-92-6	MW-92-6	MW-92-6	MW-92-6 Duplicate	MW-92-6	MW-92-6	MW-92-6
Date Sampled	NA	4/30/01	10/29/01	4/26/02	10/31/02	10/31/02	4/24/03	10/30/03	4/30/04
Elevations - Ground Surface	NA								
- Top of Screen	NA								
- Static Groundwater	NA	23.90	27.32	26.94	25.96	25.96	26.54	26.31	24.65
1,1,1-Trichloroethane ($\mu\text{g/L}$)	200	NT	NT	NT	NT	NT	NT	NT	NT
1,1-Dichloroethane ($\mu\text{g/L}$)	NA	NT	NT	NT	NT	NT	NT	NT	NT
1,2-Dichloroethane ($\mu\text{g/L}$)	5	NT	NT	NT	NT	NT	NT	NT	NT
1,4-Dichlorobenzene ($\mu\text{g/L}$)	600	NT	NT	NT	NT	NT	NT	NT	NT
Benzene ($\mu\text{g/L}$)	5	NT	NT	NT	NT	NT	NT	NT	NT
Carbon Tetrachloride ($\mu\text{g/L}$)	5	NT	NT	NT	NT	NT	NT	NT	NT
Trichloroethylene ($\mu\text{g/L}$)	5	<1	<1	<1	<1	<1	<1	<1	<0.3
Arsenic, dissolved (mg/L)	0.05	NT	NT	NT	NT	NT	NT	NT	NT
Barium, dissolved (mg/L)	2	NT	NT	NT	NT	NT	NT	NT	NT
Cadmium, dissolved (mg/L)	0.005	NT	NT	NT	NT	NT	NT	NT	NT
Chromium, dissolved (mg/L)	0.1	NT	NT	NT	NT	NT	NT	NT	NT
Copper, dissolved (mg/L)	1	NT	NT	NT	NT	NT	NT	NT	NT
Iron, dissolved (mg/L)	0.3	0.247	0.069	0.154	0.199	0.159	0.933	0.075	0.053
Lead, dissolved (mg/L)	0.015	NT	NT	NT	NT	NT	NT	NT	NT
Magnesium, dissolved (mg/L)	NA	NT	NT	NT	NT	NT	NT	NT	NT
Mercury, dissolved (mg/L)	0.002	NT	NT	NT	NT	NT	NT	NT	NT
Zinc, dissolved (mg/L)	5	NT	NT	NT	NT	NT	NT	NT	NT
Chemical Oxygen Demand (mg/L)	NA	12	<10	15	14	21	15	14	19
Chloride (mg/L)	250	135	117	110	126	127	129	113	115
Nitrogen, Ammonia (mg/L)	NA	<1	<1	<1	<1	<1	<1	<1	<1
Phenols, total (mg/L)	4	NT	<0.1	NT	<0.1	<0.1	NT	<0.1	NT
Total Organic Halogens (TOX) (mg/L)	none	NT	<0.01	NT	0.023	0.033	NT	<0.01	NT

NT = Not Tested

TABLE-7 Continued: GROUNDWATER ANALYTICAL DATA (MW-92-6)

Boring / Well Number	MCL or Action Level	MW-92-6	MW-92-6	MW-92-6	MW-92-6	MW-92-6 Duplicate	MW-92-6	MW-92-6	MW-92-6
Date Sampled	NA	10/13/04	4/28/05	10/27/05					
Elevations - Ground Surface	NA								
- Top of Screen	NA								
- Static Groundwater	NA	24.29	29.15	26.37					
1,1,1-Trichloroethane ($\mu\text{g/L}$)	200	NT	NT	NT					
1,1-Dichloroethane ($\mu\text{g/L}$)	NA	NT	NT	NT					
1,2-Dichloroethane ($\mu\text{g/L}$)	5	NT	NT	NT					
1,4-Dichlorobenzene ($\mu\text{g/L}$)	600	NT	NT	NT					
Benzene ($\mu\text{g/L}$)	5	NT	NT	NT					
Carbon Tetrachloride ($\mu\text{g/L}$)	5	NT	NT	NT					
Trichloroethylene ($\mu\text{g/L}$)	5	<0.3	<0.3	<0.3					
Arsenic, dissolved (mg/L)	0.05	NT	NT	NT					
Barium, dissolved (mg/L)	2	NT	NT	NT					
Cadmium, dissolved (mg/L)	0.005	NT	NT	NT					
Chromium, dissolved (mg/L)	0.1	NT	NT	NT					
Copper, dissolved (mg/L)	1	NT	NT	NT					
Iron, dissolved (mg/L)	0.3	0.068	0.043	0.232					
Lead, dissolved (mg/L)	0.015	NT	NT	NT					
Magnesium, dissolved (mg/L)	NA	NT	NT	NT					
Mercury, dissolved (mg/L)	0.002	NT	NT	NT					
Zinc, dissolved (mg/L)	5	NT	NT	NT					
Chemical Oxygen Demand (mg/L)	NA	13	23	16					
Chloride (mg/L)	250	123	126	103					
Nitrogen, Ammonia (mg/L)	NA	<1	<1	<1					
Phenols, total (mg/L)	4	<0.1	NT	<0.1					
Total Organic Halogens (TOX) (mg/L)	none	0.042	NT	0.052					

NT = Not Tested

TABLE-8: GROUNDWATER ANALYTICAL RESULTS (MW-92-7)

Boring / Well Number	MCL or Action Level	MW-92-7	Duplicate MW-92-7	MW-92-7	MW-92-7	MW-92-7	MW-92-7 (duplicate)	MW-92-7	MW-92-7
Date Sampled	NA	4/2/97	4/2/97	7/28/97	10/20/97	1/28/98	1/28/98	9/10/98	3/23/99
Elevations - Ground Surface	NA								
- Top of Screen	NA								
- Static Groundwater	NA	22.2	22.2	19.20	22.15	22.36	22.36	19.16	21.92
1,1,1-Trichloroethane ($\mu\text{g/L}$)	200	<1	<1	<1	<1	<1	<1	NT	<1
1,1-Dichloroethane ($\mu\text{g/L}$)	NA	<1	<1	<1	<1	<1	<1	NT	<1
1,2-Dichloroethane ($\mu\text{g/L}$)	5	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	NT	<0.4
1,4-Dichlorobenzene ($\mu\text{g/L}$)	600	<1	<1	<1	<1	<1	<1	NT	<1
Benzene ($\mu\text{g/L}$)	5	<1	<1	<1	<1	<1	<1	NT	<1
Carbon Tetrachloride ($\mu\text{g/L}$)	5	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	NT	<0.3
Trichloroethylene ($\mu\text{g/L}$)	5	<1	<1	<1	<1	<1	<1	NT	<1
Arsenic, dissolved (mg/L)	0.05	<0.001	<0.001	<0.001	<0.001	0.001	<0.001	NT	<0.001
Barium, dissolved (mg/L)	2	0.15	0.149	0.088	0.12	0.163	0.167	NT	0.164
Cadmium, dissolved (mg/L)	0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	NT	<0.001
Chromium, dissolved (mg/L)	0.1	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	NT	<0.03
Copper, dissolved (mg/L)	1	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	NT	<0.03
Iron, dissolved (mg/L)	0.3	7.51	7.54	0.036	0.059	8.11	8.27	4.12	6.52
Lead, dissolved (mg/L)	0.015	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	NT	<0.005
Magnesium, dissolved (mg/L)	NA	57	56.8	32.5	43.8	60	61	NT	55.7
Mercury, dissolved (mg/L)	0.002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	NT	<0.0005
Zinc, dissolved (mg/L)	5	<0.03	0.03	0.072	<0.03	<0.03	<0.03	NT	<0.03
Chemical Oxygen Demand (mg/L)	NA	19	18	<10	<10	<10	<10	<10	<10
Chloride (mg/L)	250	51	51	98	72	21	50	54	57
Nitrogen, Ammonia (mg/L)	NA	<1	<1	<1	<1	<1	<1	<1	<1
Phenols, total (mg/L)	4	NT	NT	NT	NT	<0.1	<0.1	NT	<0.1
Total Organic Halogens (TOX) (mg/L)	none	NT	NT	NT	NT	0.02	0.01	NT	0.03

NT = Not Tested

TABLE-8 Continued: GROUNDWATER ANALYTICAL RESULTS (MW-92-7)

Boring / Well Number	MCL or Action Level	MW-92-7	MW-92-7	MW-92-7	MW-92-7	MW-92-7	MW-92-7	MW-92-7	MW-92-7
Date Sampled	NA	4/25/00	10/25/00	4/30/01	10/29/01	4/26/02	10/31/02	4/24/03	10/30/03
Elevations - Ground Surface	NA								
- Top of Screen	NA								
- Static Groundwater	NA	28.15	27.66	24.00	26.28	27.10	26.10	26.70	26.49
1,1,1-Trichloroethane ($\mu\text{g/L}$)	200	NT	NT	NT	NT	NT	NT	NT	NT
1,1-Dichloroethane ($\mu\text{g/L}$)	NA	NT	NT	NT	NT	NT	NT	NT	NT
1,2-Dichloroethane ($\mu\text{g/L}$)	5	NT	NT	NT	NT	NT	NT	NT	NT
1,4-Dichlorobenzene ($\mu\text{g/L}$)	600	NT	NT	NT	NT	NT	NT	NT	NT
Benzene ($\mu\text{g/L}$)	5	NT	NT	NT	NT	NT	NT	NT	NT
Carbon Tetrachloride ($\mu\text{g/L}$)	5	NT	NT	NT	NT	NT	NT	NT	NT
Trichloroethylene ($\mu\text{g/L}$)	5	<1	<1	<1	<1	<1	<1	<1	<1
Arsenic, dissolved (mg/L)	0.05	NT	NT	NT	NT	NT	NT	NT	NT
Barium, dissolved (mg/L)	2	NT	NT	NT	NT	NT	NT	NT	NT
Cadmium, dissolved (mg/L)	0.005	NT	NT	NT	NT	NT	NT	NT	NT
Chromium, dissolved (mg/L)	0.1	NT	NT	NT	NT	NT	NT	NT	NT
Copper, dissolved (mg/L)	1	NT	NT	NT	NT	NT	NT	NT	NT
Iron, dissolved (mg/L)	0.3	3.23	6.82	7.24	8.21	6.33	5.24	6.24	5.96
Lead, dissolved (mg/L)	0.015	NT	NT	NT	NT	NT	NT	NT	NT
Magnesium, dissolved (mg/L)	NA	NT	NT	NT	NT	NT	NT	NT	NT
Mercury, dissolved (mg/L)	0.002	NT	NT	NT	NT	NT	NT	NT	NT
Zinc, dissolved (mg/L)	5	NT	NT	NT	NT	NT	NT	NT	NT
Chemical Oxygen Demand (mg/L)	NA	<10	<10	<10	14	11	14	25	12
Chloride (mg/L)	250	41	46	39	52	52	58	58	51
Nitrogen, Ammonia (mg/L)	NA	<1	<1	<1	<1	<1	<1	<1	<1
Phenols, total (mg/L)	4	NT	<0.1	NT	<0.1	NT	<0.1	NT	<0.1
Total Organic Halogens (TOX) (mg/L)	none	NT	0.01	NT	0.016	NT	0.022	NT	0.023

NT = Not Tested

TABLE-8 Continued: GROUNDWATER ANALYTICAL RESULTS (MW-92-7)

Boring / Well Number	MCL or Action Level	MW-92-7	MW-92-7	MW-92-7	MW-92-7	MW-92-7	MW-92-7	MW-92-7	MW-92-7
Date Sampled	NA	4/30/04	10/13/04	4/28/05	10/27/05				
Elevations - Ground Surface	NA								
- Top of Screen	NA								
- Static Groundwater	NA	24.87	24.43	29.28	26.51				
1,1,1-Trichloroethane ($\mu\text{g/L}$)	200	NT	NT	NT	NT				
1,1-Dichloroethane ($\mu\text{g/L}$)	NA	NT	NT	NT	NT				
1,2-Dichloroethane ($\mu\text{g/L}$)	5	NT	NT	NT	NT				
1,4-Dichlorobenzene ($\mu\text{g/L}$)	600	NT	NT	NT	NT				
Benzene ($\mu\text{g/L}$)	5	NT	NT	NT	NT				
Carbon Tetrachloride ($\mu\text{g/L}$)	5	NT	NT	NT	NT				
Trichloroethylene ($\mu\text{g/L}$)	5	<0.3	<0.3	<0.3	<0.3				
Arsenic, dissolved (mg/L)	0.05	NT	NT	NT	NT				
Barium, dissolved (mg/L)	2	NT	NT	NT	NT				
Cadmium, dissolved (mg/L)	0.005	NT	NT	NT	NT				
Chromium, dissolved (mg/L)	0.1	NT	NT	NT	NT				
Copper, dissolved (mg/L)	1	NT	NT	NT	NT				
Iron, dissolved (mg/L)	0.3	1.25	6.33	5.05	5.50				
Lead, dissolved (mg/L)	0.015	NT	NT	NT	NT				
Magnesium, dissolved (mg/L)	NA	NT	NT	NT	NT				
Mercury, dissolved (mg/L)	0.002	NT	NT	NT	NT				
Zinc, dissolved (mg/L)	5	NT	NT	NT	NT				
Chemical Oxygen Demand (mg/L)	NA	20	<10	28	11				
Chloride (mg/L)	250	53	49	61	55				
Nitrogen, Ammonia (mg/L)	NA	<1	<1	<1	<1				
Phenols, total (mg/L)	4	NT	<0.1	NT	<0.1				
Total Organic Halogens (TOX) (mg/L)	none	NT	0.022	NT	0.041				

NT = Not Tested

TABLE-9: GROUNDWATER ANALYTICAL RESULTS (SURFACE WATER BODY)

Boring / Well Number	MCL or Action Level	SW-1	SW-1	SW-1	SW-1	SW-1	SW-1	SW-1	SW-1
Date Sampled	NA	4/2/97	7/28/97	10/20/97	1/28/98	9/10/98	3/23/99	4/25/00	10/25/00
Elevations - Ground Surface	NA								
- Top of Screen	NA								
- Static Groundwater	NA								
1,1,1-Trichloroethane ($\mu\text{g/L}$)	200	<1	<1	<1	<1	NT	<1	NT	NT
1,1-Dichloroethane ($\mu\text{g/L}$)	NA	<1	<1	<1	<1	NT	<1	NT	NT
1,2-Dichloroethane ($\mu\text{g/L}$)	5	<0.4	<0.4	<0.4	<0.4	NT	<0.4	NT	NT
1,4-Dichlorobenzene ($\mu\text{g/L}$)	600	<1	<1	<1	<1	NT	<1	NT	NT
Benzene ($\mu\text{g/L}$)	5	<1	<1	<1	<1	NT	<1	NT	NT
Carbon Tetrachloride ($\mu\text{g/L}$)	5	<0.3	<0.3	<0.3	<0.3	NT	<0.3	NT	NT
Trichloroethylene ($\mu\text{g/L}$)	5	<1	<1	<1	<1	NT	<1	<1	<1
Arsenic, dissolved (mg/L)	0.05	0.0013	0.002	0.0029	0.003	NT	<0.001	NT	NT
Barium, dissolved (mg/L)	2	0.11	0.05	0.099	0.076	NT	0.048	NT	NT
Cadmium, dissolved (mg/L)	0.005	<0.001	<0.001	<0.001	<0.001	NT	0.004	NT	NT
Chromium, dissolved (mg/L)	0.1	<0.03	<0.03	<0.03	<0.03	NT	<0.03	NT	NT
Copper, dissolved (mg/L)	1	<0.03	<0.03	<0.03	<0.03	NT	<0.03	NT	NT
Iron, dissolved (mg/L)	0.3	0.033	0.035	<0.03	<0.035	<0.03	0.052	<0.03	<0.03
Lead, dissolved (mg/L)	0.015	<0.005	<0.005	<0.005	<0.005	NT	<0.005	NT	NT
Magnesium, dissolved (mg/L)	NA	0.68	4	0.25	0.3	NT	2.06	NT	NT
Mercury, dissolved (mg/L)	0.002	<0.0005	<0.0005	<0.0005	<0.0005	NT	<0.0005	NT	NT
Zinc, dissolved (mg/L)	5	<0.03	0.031	0.033	<0.03	NT	<0.03	NT	NT
Chemical Oxygen Demand (mg/L)	NA	27	21	11	27	<10	10.5	<10	18
Chloride (mg/L)	250	54	52	51	56	47.5	51	46	41
Nitrogen, Ammonia (mg/L)	NA	<1	<1	<1	<1	<1	<1	<1	<1
Phenols, total (mg/L)	4	NT	NT	NT	<0.1	NT	<0.1	NT	<0.1
Total Organic Halogens (TOX) (mg/L)	none	NT	NT	NT	0.02	NT	0.02	NT	0.02

NT = Not Tested

TABLE-9 Continued: GROUNDWATER ANALYTICAL RESULTS (SURFACE WATER BODY)

Boring / Well Number	MCL or Action Level	SW-1	SW-1	SW-1	SW-1	SW-1	SW-1	SW-1	SW-1
Date Sampled	NA	4/30/01	10/29/01	4/26/02	10/31/02	4/24/03	10/30/03	4/30/04	10/13/04
Elevations - Ground Surface	NA								
- Top of Screen	NA								
- Static Groundwater	NA								
1,1,1-Trichloroethane ($\mu\text{g/L}$)	200	NT	NT	NT	NT	NT	NT	NT	NT
1,1-Dichloroethane ($\mu\text{g/L}$)	NA	NT	NT	NT	NT	NT	NT	NT	NT
1,2-Dichloroethane ($\mu\text{g/L}$)	5	NT	NT	NT	NT	NT	NT	NT	NT
1,4-Dichlorobenzene ($\mu\text{g/L}$)	600	NT	NT	NT	NT	NT	NT	NT	NT
Benzene ($\mu\text{g/L}$)	5	NT	NT	NT	NT	NT	NT	NT	NT
Carbon Tetrachloride ($\mu\text{g/L}$)	5	NT	NT	NT	NT	NT	NT	NT	NT
Trichloroethylene ($\mu\text{g/L}$)	5	<1	<1	<1	<1	<1	<1	<0.3	<0.3
Arsenic, dissolved (mg/L)	0.05	NT	NT	NT	NT	NT	NT	NT	NT
Barium, dissolved (mg/L)	2	NT	NT	NT	NT	NT	NT	NT	NT
Cadmium, dissolved (mg/L)	0.005	NT	NT	NT	NT	NT	NT	NT	NT
Chromium, dissolved (mg/L)	0.1	NT	NT	NT	NT	NT	NT	NT	NT
Copper, dissolved (mg/L)	1	NT	NT	NT	NT	NT	NT	NT	NT
Iron, dissolved (mg/L)	0.3	<0.03	<0.03	<0.03	0.032	<0.03	<0.03	<0.03	<0.03
Lead, dissolved (mg/L)	0.015	NT	NT	NT	NT	NT	NT	NT	NT
Magnesium, dissolved (mg/L)	NA	NT	NT	NT	NT	NT	NT	NT	NT
Mercury, dissolved (mg/L)	0.002	NT	NT	NT	NT	NT	NT	NT	NT
Zinc, dissolved (mg/L)	5	NT	NT	NT	NT	NT	NT	NT	NT
Chemical Oxygen Demand (mg/L)	NA	<10	<10	11	23	29	15	26	<10
Chloride (mg/L)	250	<10	48	44	45	51	47	49	49
Nitrogen, Ammonia (mg/L)	NA	<1	<1	<1	<1	<1	<1	<1	<1
Phenols, total (mg/L)	4	NT	<0.1	NT	<0.1	NT	<0.1	NT	<0.1
Total Organic Halogens (TOX) (mg/L)	none	NT	<0.010	NT	0.015	NT	<0.01	NT	<0.01

NT = Not Tested

TABLE-9 Continued: GROUNDWATER ANALYTICAL RESULTS (SURFACE WATER BODY)

Boring / Well Number	MCL or Action Level	SW-1	SW-1	SW-1	SW-1	SW-1	SW-1	SW-1	SW-1
Date Sampled	NA	4/28/05	10/27/05						
Elevations - Ground Surface	NA								
- Top of Screen	NA								
- Static Groundwater	NA								
1,1,1-Trichloroethane ($\mu\text{g/L}$)	200	NT	NT						
1,1-Dichloroethane ($\mu\text{g/L}$)	NA	NT	NT						
1,2-Dichloroethane ($\mu\text{g/L}$)	5	NT	NT						
1,4-Dichlorobenzene ($\mu\text{g/L}$)	600	NT	NT						
Benzene ($\mu\text{g/L}$)	5	NT	NT						
Carbon Tetrachloride ($\mu\text{g/L}$)	5	NT	NT						
Trichloroethylene ($\mu\text{g/L}$)	5	<0.3	<0.3						
Arsenic, dissolved (mg/L)	0.05	NT	NT						
Barium, dissolved (mg/L)	2	NT	NT						
Cadmium, dissolved (mg/L)	0.005	NT	NT						
Chromium, dissolved (mg/L)	0.1	NT	NT						
Copper, dissolved (mg/L)	1	NT	NT						
Iron, dissolved (mg/L)	0.3	0.104	0.085						
Lead, dissolved (mg/L)	0.015	NT	NT						
Magnesium, dissolved (mg/L)	NA	NT	NT						
Mercury, dissolved (mg/L)	0.002	NT	NT						
Zinc, dissolved (mg/L)	5	NT	NT						
Chemical Oxygen Demand (mg/L)	NA	<10	16						
Chloride (mg/L)	250	61	64						
Nitrogen, Ammonia (mg/L)	NA	<1	<1						
Phenols, total (mg/L)	4	NT	<0.1						
Total Organic Halogens (TOX) (mg/L)	none	NT	0.026						

NT = Not Tested

TABLE-10: GROUNDWATER ANALYTICAL RESULTS (TRIP BLANK)

Boring / Well Number	MCL or Action Level	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank
Date Sampled	NA	4/2/97	7/28/97	10/20/97	1/28/98	9/10/98	3/23/99	4/25/00	10/25/00
Elevations - Ground Surface	NA				Not Collected		Not Collected		Not Collected
- Top of Screen	NA								
- Static Groundwater	NA								
1,1,1-Trichloroethane ($\mu\text{g/L}$)	200	<1	<1	<1		NT		<1	
1,1-Dichloroethane ($\mu\text{g/L}$)	NA	<1	<1	<1		NT		<1	
1,2-Dichloroethane ($\mu\text{g/L}$)	5	<0.4	<0.4	<0.4		NT		<0.4	
1,4-Dichlorobenzene ($\mu\text{g/L}$)	600	<1	<1	<1		NT		<1	
Benzene ($\mu\text{g/L}$)	5	<1	<1	<1		NT		<1	
Carbon Tetrachloride ($\mu\text{g/L}$)	5	<0.3	<0.3	<0.3		NT		<0.3	
Trichloroethylene ($\mu\text{g/L}$)	5	<1	<1	<1		NT		<1	
Arsenic, dissolved (mg/L)	0.05	<0.001	<0.001	<0.001		NT		<0.001	
Barium, dissolved (mg/L)	2	<0.01	<0.01	<0.01		NT		<0.01	
Cadmium, dissolved (mg/L)	0.005	<0.001	<0.001	<0.001		NT		<0.001	
Chromium, dissolved (mg/L)	0.1	<0.03	<0.03	<0.03		NT		<0.03	
Copper, dissolved (mg/L)	1	<0.03	<0.03	<0.03		NT		<0.03	
Iron, dissolved (mg/L)	0.3	<0.03	<0.03	<0.03		<0.03		<0.03	
Lead, dissolved (mg/L)	0.015	<0.005	<0.005	<0.005		NT		<0.005	
Magnesium, dissolved (mg/L)	NA	<0.1	<0.1	<0.1		NT		<0.1	
Mercury, dissolved (mg/L)	0.002	<0.0005	<0.0005	<0.0005		NT		<0.0005	
Zinc, dissolved (mg/L)	5	<0.03	<0.03	<0.03		NT		<0.03	
Chemical Oxygen Demand (mg/L)	NA	<10	<10	<10		<10		<10	
Chloride (mg/L)	250	<10	<10	<10		<10		<10	
Nitrogen, Ammonia (mg/L)	NA	<1	<1	<1		<1		<1	
Phenols, total (mg/L)	4	NT	NT	NT		NT		<0.1	
Total Organic Halogens (TOX) (mg/L)	None	NT	NT	NT		NT		<0.001	

NT = Not Tested

TABLE-11: STATIC GROUNDWATER LEVELS

Boring / Well Number	Static Water Levels	Static Water Level								
Date	4/2/97	5/12/97	6/30/97	7/28/97	8/19/97	9/8/97	10/20/97	11/97	12/1/97	1/28/98
MW-92-1	18.13	16.98	17.03	16.55	17.00	17.78	18.88	Not taken	19.05	19.28
MW-92-2	18.80	17.69	17.81	17.07	17.70	18.46	19.57	Not taken	19.73	19.98
MW-92-3	NA	Not taken	NA	NA						
MW-92-4	21.28	20.06	20.63	20.31	21.20	22.09	23.30	Not taken	23.44	23.47
MW-92-5	21.48	20.26	20.81	20.45	21.40	22.34	23.40	Not taken	23.60	23.68
MW-92-6	20.22	19.06	19.52	19.12	19.99	20.94	21.05	Not taken	22.20	22.30
MW-92-7	22.20	19.05	19.89	19.20	20.09	21.02	22.15	Not taken	22.35	22.36
L-1	Dry	Not taken	Dry	Dry						
L-2	Dry	Not taken	Dry	Dry						

Boring / Well Number	Static Water Levels	Static Water Level								
Date	9/10/98	3/23/99	4/25/00	7/31/00	10/25/00	1/12/01	2/12/01	3/29/01	4/30/01	5/25/01
MW-92-1	15.57	19.06	21.53	NA	21.06	NA	NA	NA	19.04	NA
MW-92-1R	NA	NA	19.54	18.53	19.96	15.17	14.1	13.82	12.34	12.20
MW-92-2	16.24	19.76	22.20	20.49	21.75	NA	NA	NA	19.71	NA
MW-92-3	NA	NA	20.10	18.03	23.45	23.66	23.08	21.63	20.00	19.84
MW-92-4	20.24	23.00	25.73	NA	25.32	NA	NA	NA	21.70	NA
MW-92-5	20.46	23.17	25.96	NA	25.55	NA	NA	NA	21.94	NA
MW-92-6	17.61	21.74	27.96	NA	27.47	NA	NA	NA	23.90	NA
MW-92-7	19.16	21.92	28.15	NA	27.66	NA	NA	NA	24.00	NA
L-1	Dry	NA	Dry	NA	Dry	NA	NA	NA	NA	NA
L-2	Dry	NA	Dry	NA	Dry	NA	NA	NA	NA	NA

NA = Not Available

TABLE 11 Continued: STATIC GROUNDWATER LEVELS

Boring / Well Number	Static Water Levels	Static Water Level								
Date	4/24/03	10/30/03	4/30/04	10/13/04	4/28/05	10/27/05				
MW-92-1	20.69	20.02	18.95	18.17	22.70	20.44				
MW-92-1R	14.15	13.65	12.38	11.65	16.30	13.85				
MW-92-2	21.37	20.69	19.63	18.78	23.37	21.48				
MW-92-3	22.54	22.29	20.77	20.27	25.35	22.38				
MW-92-4	24.32	24.13	22.61	22.10	27.31	24.22				
MW-92-5	24.63	24.39	22.79	22.34	27.36	24.48				
MW-92-6	26.54	26.31	24.65	24.29	29.15	26.37				
MW-92-7	26.70	26.49	24.87	24.43	28.28	26.51				
L-1	NA	NA	Dry	Dry	Dry	Dry				
L-2	NA	NA	Dry	Dry	Dry	Dry				

NA = Not Available

TABLE 12: UPPER AQUIFER (Monitoring wells are shallow): Upgradient Mean + 2(Standard Deviation)

Chemical	Upgradient Mean + 2(standard deviation)	Date of exceedence(s)	Monitoring well concentration (mg/L)	
			MW-92-4	MW-92-6
Zinc	0.030	4/97	0.032	
		7/97	0.046	0.031
Chloride	58.36	4/97		61
		7/97		88
		10/97		155
		1/98	80	142
		3/99		100
		4/00		120
		10/00		119
		4/01		135
		10/01	63	117
		4/02	75	126
		10/02	102	127
		4/03	64	129
		10/03	117	113
		4/04	61	115
		10/04	115	123
		4/05		126
		10/05	106	103
Nitrogen, Ammonia	1.47	10/97		3.2
Iron, Dissolved	0.24	9/98		4.12
		10/00		0.358
		4/03		0.933
Chemical O ₂ Demand	17.78	10/97		36
		1/98	23	26
		3/99		19.4
		10/00		22
		10/02	20	21
		4/03	24	
		10/03	24	
		4/04		19
		4/05		23

TABLE 12: Continued...

Chemical	Upgradient Mean + 2(standard deviation)	Date of exceedence(s)	Monitoring well concentration (mg/L)	
			MW-92-4	MW-92-6
Conductance	1.26	9/98		1.50
		4/00		1.86
		10/00		1.79
		4/01		1.83
		10/01		1.33
		4/02		1.32
		10/02		1.52
		4/03		1.71
		4/05		1.27
		10/05		1.27
PH	8.23	10/97		9.9
		1/98		8.6
		4/01		7.8
Temperature	16.30	7/97	21.1	20

TABLE 13: Chemicals exceeding both Action Levels and Upgradient Mean + 2(Standard Deviation)

Chemical	Date of exceedence(s)	Action Level	Upgradient Mean + 2(standard deviation)	Monitoring well concentration (mg/L)	
					MW-92-6
Arsenic	7/97	0.001	0.001		0.009
	10/97				0.014
	1/98				0.005
Iron	9/98	0.3	0.26		4.12
	10/00				0.358
	4/03				0.933
PH	10/97	Upper action level = 8.5	8.23		9.9
	1/98				8.6

TABLE 14: LOWER AQUIFER (Monitoring wells are deep): Upgradient Mean + 2(Standard Deviation)

Chemical	Upgradient Mean + 2(stdandard deviation)	Date of exceedence(s)	Monitoring well concentration (mg/L)	
			MW-92-5	MW-92-7
Barium	0.1599	1/98		0.167
		3/99	0.19	0.164
Magnesium, Dissolved	52.8382	4/97		57
		1/98		61
		3/99		55.7
Zinc, Dissolved	0.0486	7/97	0.083	0.072
Chloride	97.32	10/03		113
Chemical O₂ Demand	14.89	4/97		19
		4/03		25
		4/04		20
		4/05		28
Conductance	1.32	9/98		1.5
		3/99		1.43
		10/02		1.35
Temperature	16.26	7/97	18.30	17.80

TABLE 15: SURFACE WATER RESULTS EXCEEDING ACTION LEVELS

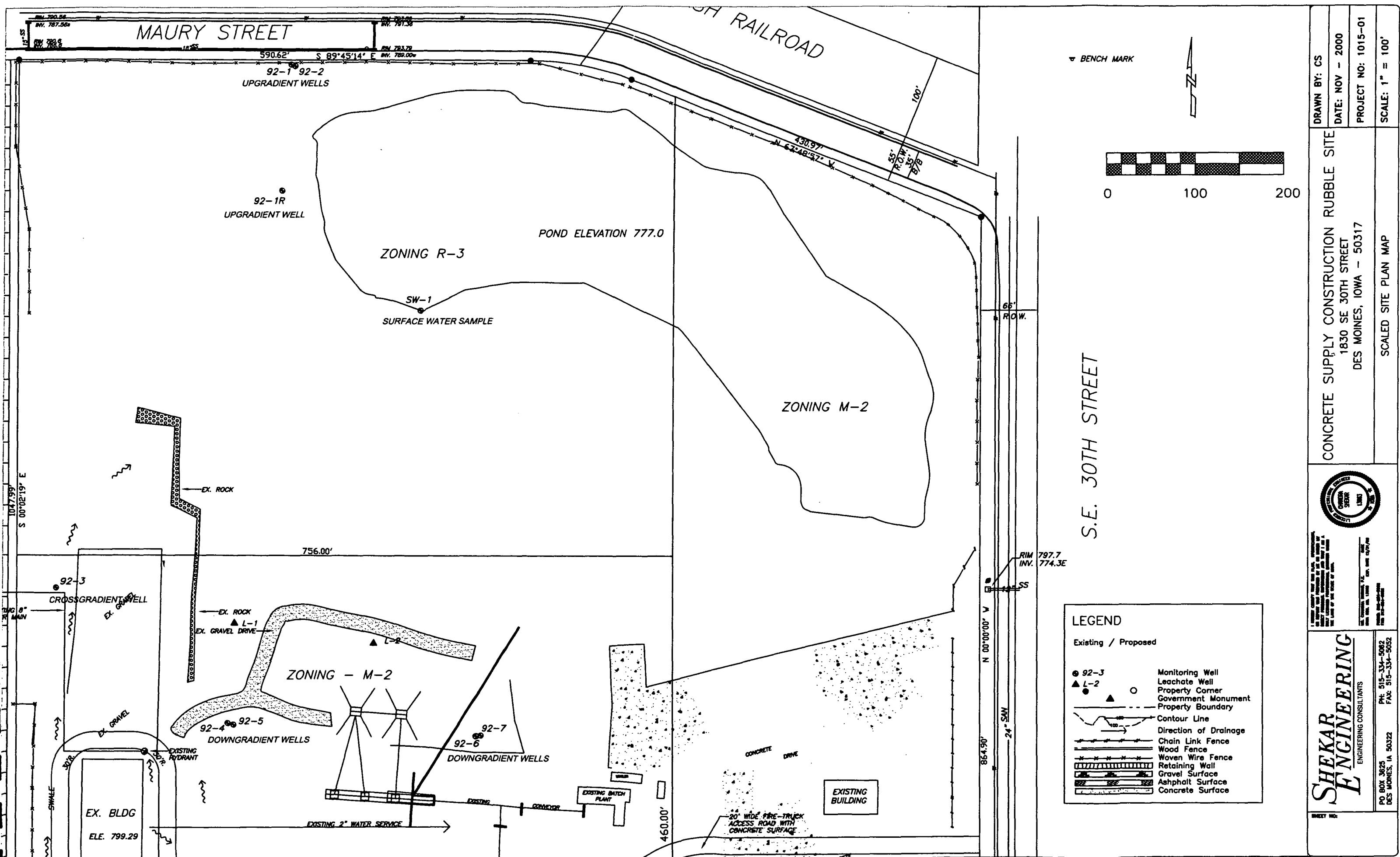
Chemical	Date of exceedence(s)	Action Level	SW-1 concentration
Arsenic	4/97	0.001	0.0013 mg/L
	7/97		0.002 mg/L
	10/97		0.0029 mg/L
	1/98		0.003 mg/L
	9/98		0.003 mg/L
PH	4/97	Upper action level = 8.5	11.4
	7/97	Lower action level = 6.5	10.1
	10/97		11.2
	1/98		11.8
	9/98		9.5
	3/99		9.8
	4/00		9.8
	4/01		8.7
	4/02		11.3
	10/02		11.2
	4/03		11.3
	10/03		10.6
	4/04		10.29
	10/04		9.42
	4/05		9.16
	10/05		9.77

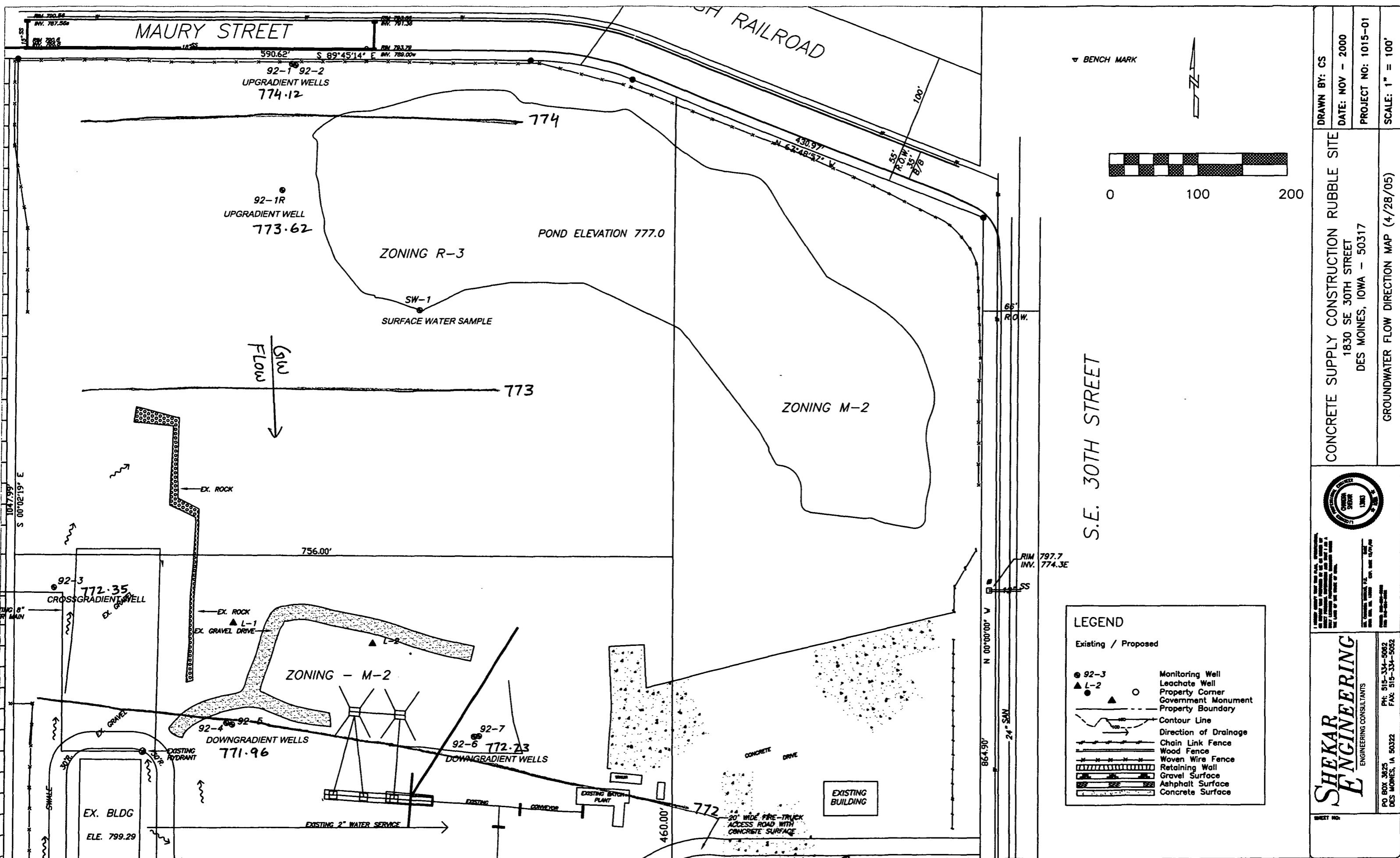
TABLE 16: METHANE MONITORING RESULTS

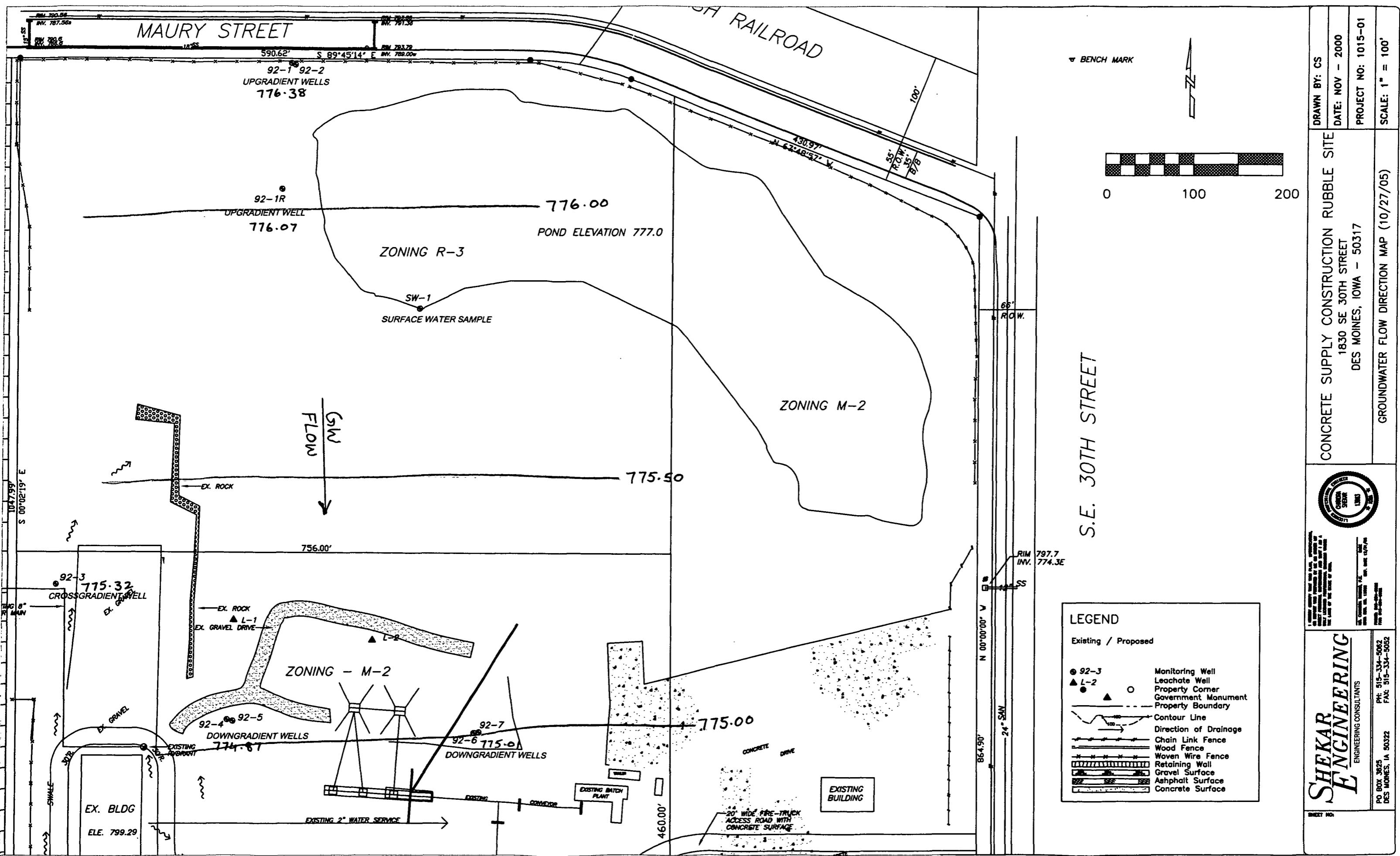
Methane Sampling Location	Methane Reading									
Date	1/12/01	2/12/01	3/29/01	4/30/01	5/25/01	6/30/01	7/31/01	8/31/01	9/29/01	10/29/01
Location-1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Location-2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Location-3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Location-4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Location-5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Location-6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Location-7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Location-8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Methane Sampling Location	Methane Reading									
Date	11/30/01	12/31/01	1/31/02	2/25/02	3/29/02	4/28/02				
Location-1	0.00	0.00	0.00	0.00	0.00	0.00				
Location-2	0.00	0.00	0.00	0.00	0.00	0.00				
Location-3	0.00	0.00	0.00	0.00	0.00	0.00				
Location-4	0.00	0.00	0.00	0.00	0.00	0.00				
Location-5	0.00	0.00	0.00	0.00	0.00	0.00				
Location-6	0.00	0.00	0.00	0.00	0.00	0.00				
Location-7	0.00	0.00	0.00	0.00	0.00	0.00				
Location-8	0.00	0.00	0.00	0.00	0.00	0.00				

**APPENDIX - 2
MAPS**







APPENDIX - 3
CONTAMINANT GRAPHS

Upper Aquifer (Monitoring Wells are Shallow) Sampling Result - 1997 to 2005

Arsenic, Dissolved (mg/L)

Date	<u>Upgradient</u>	<u>Downgradient</u>	
	MW-92-1	MW-92-4	MW-92-6
Apr-97	<0.001	<0.001	0.001
Jul-97	<0.001	<0.001	0.009
Oct-97	<0.001	<0.001	0.014
Jan-98	<0.001	<0.001	0.005
Mar-99	<0.001	<0.001	<0.001

Upgradient Mean + 2(Standard Deviation) = 0.0010 Action Level = 0.001 dNRL

Barium, Dissolved (mg/l)

Date	<u>Upgradient</u>	<u>Downgradient</u>	
	MW-92-1	MW-92-4	MW-92-6
Apr-97	0.091	0.042	0.075
Jul-97	0.089	0.035	0.034
Oct-97	0.085	0.037	0.030
Jan-98	0.098	0.04	0.069
Mar-99	0.085	0.05	0.098

Upgradient Mean + 2(Standard Deviation) = 0.1003 Action Level = 2 fHAL

Magnesium, Dissolved (mg/l)

Date	<u>Upgradient</u>	<u>Downgradient</u>	
	MW-92-1	MW-92-4	MW-92-6
Apr-97	46.7	34.4	30.7
Jul-97	46.9	31.9	14
Oct-97	43	31.5	2.23
Jan-98	45	29	7.3
Mar-99	42.1	25.7	27.9

Upgradient Mean + 2(Standard Deviation) = 48.9952 Action Level = None

Zinc, Dissolved (mg/l)

Date	<u>Upgradient</u>	<u>Downgradient</u>	
	MW-92-1	MW-92-4	MW-92-6
Apr-97	<0.03	0.032	<0.03
Jul-97	<0.03	0.046	0.031
Oct-97	<0.03	<0.03	<0.03
Jan-98	<0.03	<0.03	<0.03
Mar-99	<0.03	<0.03	<0.03

Upgradient Mean + 2(Standard Deviation) = 0.0300 Action Level = 2 fHAL

Trichloroethylene ($\mu\text{g/l}$)

Date	<u>Upgradient</u> MW-92-1	<u>Downgradient</u>	
		MW-92-4	MW-92-6
Apr-97	6.4	<1	<1
Jul-97	3.0	<1	<1
Oct-97	6.0	<1	<1
Jan-98	6.9	<1	<1
Mar-99	6.3	<1	<1
Apr-00	9.7	<1	<1
Oct-00	20.0	<1	<1
Apr-01	4.4	<1	<1
Oct-01	4.8	<1	<1
Apr-02	5.9	<1	<1
Oct-02	6.8	<1	<1
Apr-03	7.3	<1	<1
Oct-03	7.0	<1	<1
Apr-04	6.3	<0.3	<0.3
Oct-04	6.4	<0.3	<0.3
Apr-05	10.9	<0.3	<0.3
Oct-05	8.4	<0.3	<0.3

Upgradient Mean + 2(Standard Deviation) = **14.89** Action Level = **3 fHAL**

Trichloroethylene ($\mu\text{g/l}$)

Date	<u>Upgradient</u> MW-92-1R	<u>Downgradient</u>	
		MW-92-4	MW-92-6
Apr-97		<1	<1
Jul-97		<1	<1
Oct-97		<1	<1
Jan-98		<1	<1
Mar-99		<1	<1
Apr-00	<1	<1	<1
Jul-00	<1		
Oct-00	<1	<1	<1
Jan-01	<2		
Apr-01	<1	<1	<1
Oct-01	<1	<1	<1
Apr-02	<1	<1	<1
Oct-02	<1	<1	<1
Apr-03	<1	<1	<1
Oct-03	<1	<1	<1
Apr-04	<0.3	<0.3	<0.3
Oct-04	<0.3	<0.3	<0.3
Apr-05	<0.3	<0.3	<0.3
Oct-05	<0.3	<0.3	<0.3

Upgradient Mean + 2(Standard Deviation) = **1.79** Action Level = **3 fHAL**

Chloride (mg/l)

Date	<u>Upgradient</u> MW-92-1	<u>Downgradient</u>	
		MW-92-4	MW-92-6
Apr-97	40	53	61
Jul-97	49	47	88
Oct-97	41	58	155
Jan-98	44	80	142
Sep-98	49	52	54
Mar-99	34	48	100
Apr-00	37	40	120
Oct-00	41	58	119
Apr-01	49	49	135
Oct-01	38	63	117
Apr-02	39	75	126
Oct-02	53	102	127
Apr-03	40	64	129
Oct-03	32	117	113
Apr-04	42	61	115
Oct-04	44	115	123
Apr-05	60	55	126
Oct-05	54	106	103

Upgradient Mean + 2(Standard Deviation) = **58.36** Action Level = **250 fSMCL****Nitrogen, Ammonia (mg/l)**

Date	<u>Upgradient</u> MW-92-1	<u>Downgradient</u>	
		MW-92-4	MW-92-6
Apr-97	<1	<1	<1
Jul-97	<1	<1	<1
Oct-97	<1	<1	3.2
Jan-98	<1	<1	1.1
Sep-98	<1	<1	<1
Mar-99	1.9	<1	<1
Apr-00	<1	<1	<1
Oct-00	<1	<1	<1
Apr-01	<1	<1	<1
Oct-01	<1	<1	<1
Apr-02	<1	<1	<1
Oct-02	<1	<1	<1
Apr-03	<1	<1	<1
Oct-03	<1	<1	<1
Apr-04	<1	<1	<1
Oct-04	<1	<1	<1
Apr-05	<1	<1	<1
Oct-05	<1	<1	<1

Upgradient Mean + 2(Standard Deviation) = **1.47** Action Level = **30 dHAL**

Iron, Dissolved (mg/l)

Date	<u>Upgradient</u>		<u>Downgradient</u>	
	MW-92-1		MW-92-4	MW-92-6
Apr-97	<0.03		<0.03	<0.03
Jul-97	<0.03		<0.03	0.179
Oct-97	<0.03		0.046	0.235
Jan-98	<0.03		0.072	0.113
Sep-98	<0.03		<0.03	4.12
Mar-99	0.102		<0.03	<0.03
Apr-00	<0.03		0.106	0.051
Oct-00	<0.03		<0.03	0.358
Apr-01	0.368		0.054	0.247
Oct-01	<0.03		0.242	0.069
Apr-02	<0.03		0.049	0.154
Oct-02	<0.03		<0.03	0.159
Apr-03	<0.03		<0.03	0.933
Oct-03	<0.03		<0.03	0.075
Apr-04	<0.03		0.041	0.053
Oct-04	0.208		<0.03	0.068
Apr-05	<0.03		<0.03	0.043
Oct-05	<0.03		<0.03	0.232

Upgradient Mean + 2(Standard Deviation) = **0.24** Action Level = 0.3 f action level

Chemical Oxygen Demand (mg/l)

Date	<u>Upgradient</u>		<u>Downgradient</u>	
	MW-92-1		MW-92-4	MW-92-6
Apr-97	<10		14	15
Jul-97	<10		<10	<10
Oct-97	<10		<10	36
Jan-98	<10		23	26
Sep-98	<10		14	<10
Mar-99	<10		<10	19.4
Apr-00	<10		<10	<10
Oct-00	<10		<10	22
Apr-01	<10		<10	12
Oct-01	<10		<10	<10
Apr-02	14		<10	14
Oct-02	<10		20	21
Apr-03	17		24	15
Oct-03	<10		24	14
Apr-04	<10		15	19
Oct-04	<10		<10	13
Apr-05	22		<10	23
Oct-05	<10		<10	16

Upgradient Mean + 2(Standard Deviation) = **17.78** Action Level = None

Conductance (mS)

Date	<u>Upgradient</u>		<u>Downgradient</u>	
	MW-92-1		MW-92-4	MW-92-6
Apr-97	0.68		0.68	0.67
Jul-97	1.00		0.90	0.80
Oct-97	0.95		0.94	1.09
Jan-98	0.93		0.90	1.23
Sep-98	1.12		1.00	1.50
Mar-99	1.02		0.96	1.21
Apr-00	1.04		0.97	1.86
Oct-00	1.15		0.96	1.79
Apr-01	1.13		1.07	1.83
Oct-01	1.02		0.90	1.33
Apr-02	0.99		0.70	1.32
Oct-02	1.18		0.74	1.52
Apr-03	1.01		0.64	1.71
Oct-03	1.04		0.98	1.19
Apr-04	1.06		0.64	1.23
Oct-04	1.13		0.97	1.19
Apr-05	1.11		0.63	1.27
Oct-05	1.01		1.23	1.27

Upgradient Mean + 2(Standard Deviation) = **1.26** Action Level = None

pH

Date	<u>Upgradient</u>		<u>Downgradient</u>	
	MW-92-1		MW-92-4	MW-92-6
Apr-97	7.1		7.6	8.2
Jul-97	6.7		7.3	8.0
Oct-97	7.3		8.0	9.9
Jan-98	7.4		7.8	8.6
Sep-98	7.0		7.6	8.2
Mar-99	6.7		6.8	7.0
Apr-00	6.9		6.9	7.1
Oct-00	6.7		7.1	7.0
Apr-01	7.0		7.6	7.8
Oct-01	7.7		6.8	7.0
Apr-02	8.4		7.8	7.0
Oct-02	6.8		7.2	6.8
Apr-03	6.7		7.5	6.6
Oct-03	5.9		6.7	6.9
Apr-04	5.9		6.4	6.6
Oct-04	5.3		6.4	7.3
Apr-05	6.8		7.2	6.5
Oct-05	6.0		6.9	6.5

Upgradient Mean + 2(Standard Deviation) = **8.23** Upper Action Level = 8.5 fSMCL
 Upgradient Mean - 2(Standard Deviation) = **5.34** Lower Action Level = 6.5 fSMCL

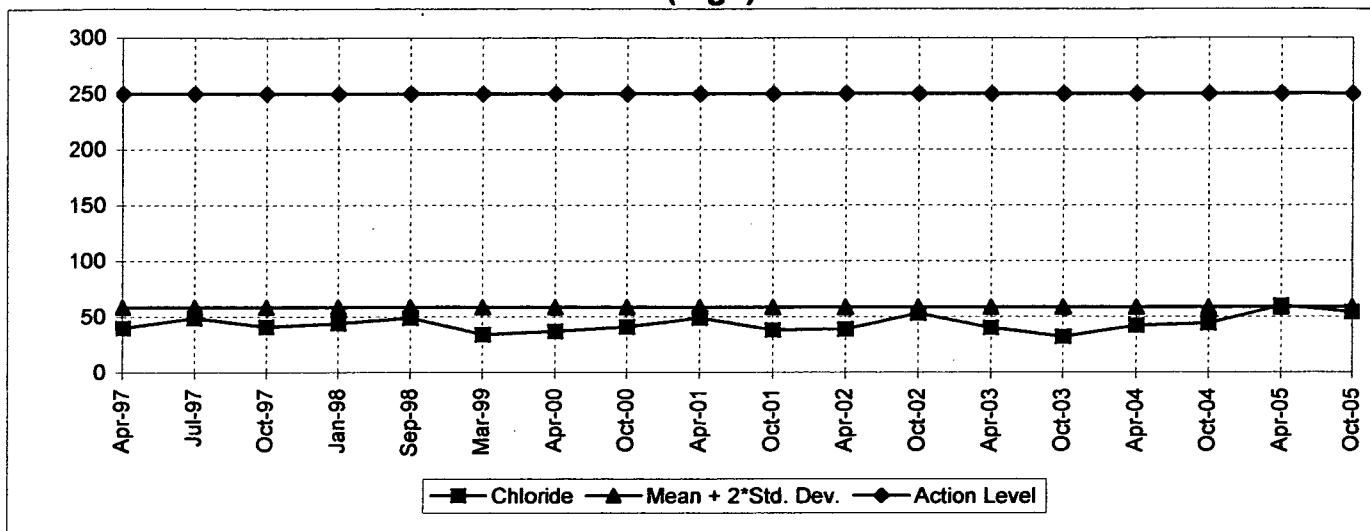
Temperature (C)

Date	<u>Upgradient</u>	<u>Downgradient</u>	
		MW-92-4	MW-92-6
Apr-97	11.70	13.00	12.00
Jul-97	16.70	21.10	20.00
Oct-97	13.00	10.00	12.00
Jan-98	10.00	10.00	11.00
Sep-98	15.00	14.40	15.00
Mar-99	11.70	13.33	13.33
Apr-00	12.77	13.88	13.88
Oct-00	15.55	13.88	14.44
Apr-01	12.22	13.33	13.33
Oct-01	13.88	12.77	12.22
Apr-02	12.78	12.22	12.22
Oct-02	13.33	13.33	13.88
Apr-03	12.77	13.33	13.88
Oct-03	13.88	13.88	13.33
Apr-04	11.11	11.67	12.22
Oct-04	12.78	12.78	12.78
Apr-05	11.66	12.77	12.77
Oct-05	13.88	12.77	12.77

Upgradient Mean + 2(Standard Deviation) = **16.30** Action Level = None

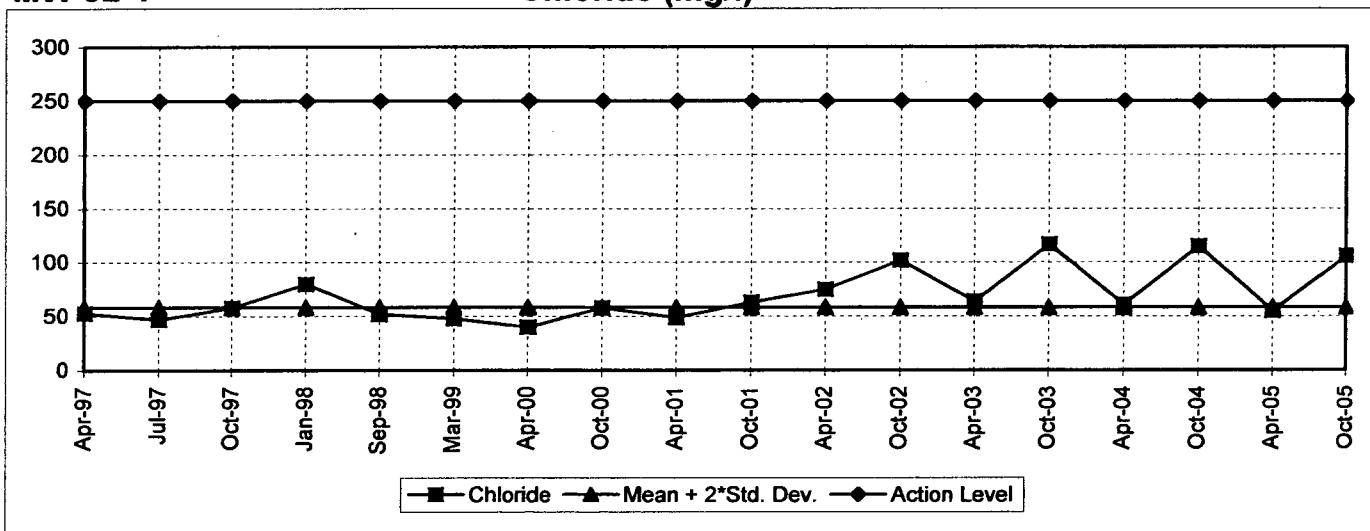
MW-92-1

Chloride (mg/l)



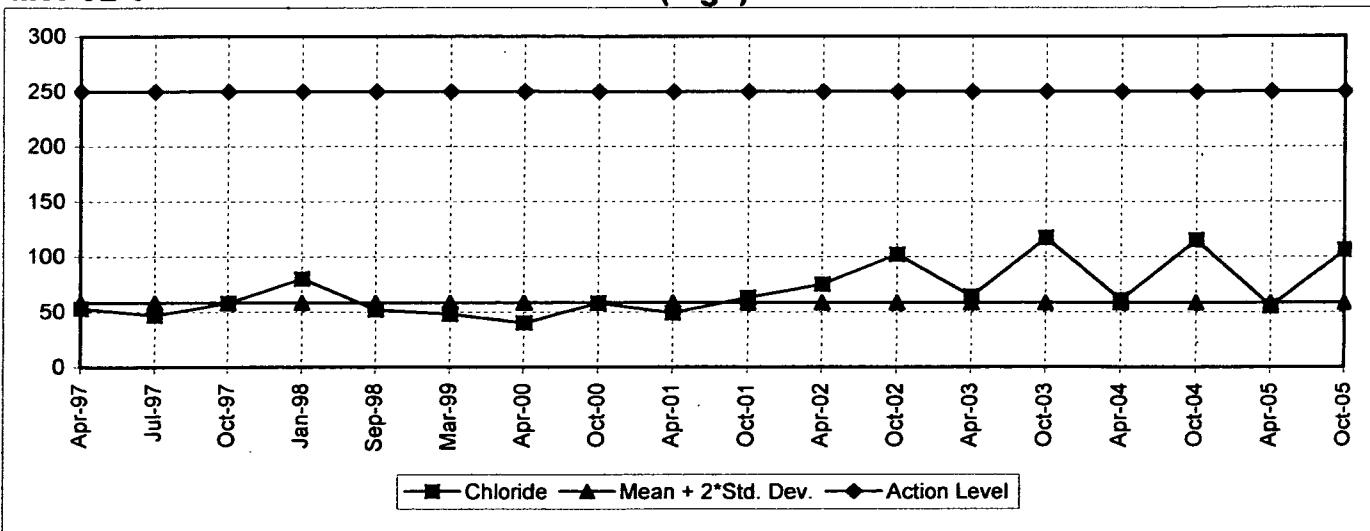
MW-92-4

Chloride (mg/l)



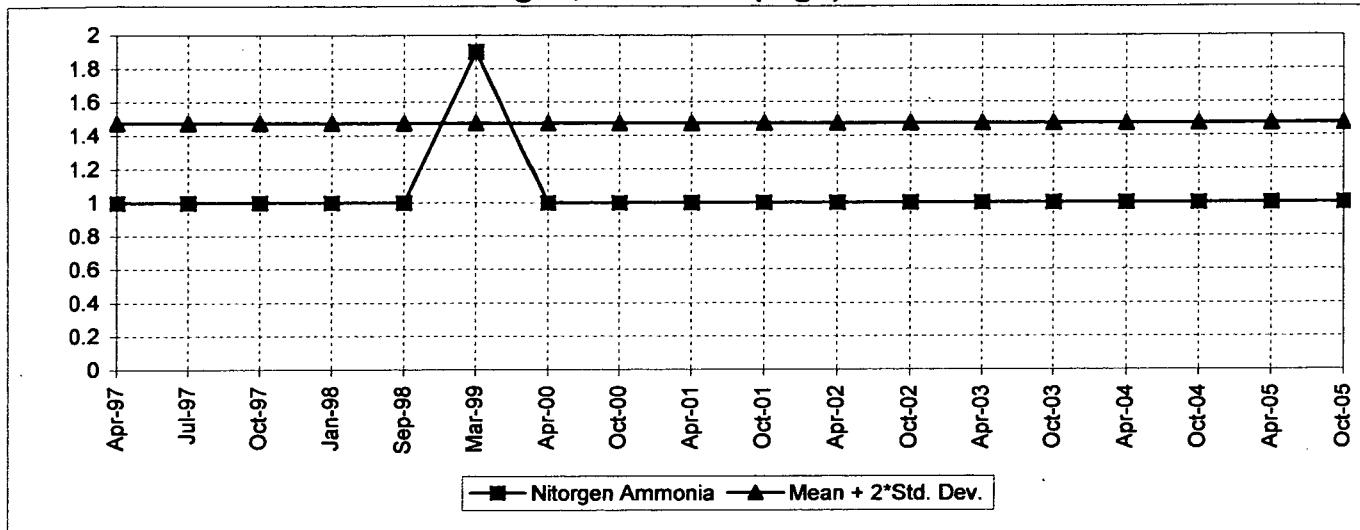
MW-92-6

Chloride (mg/l)



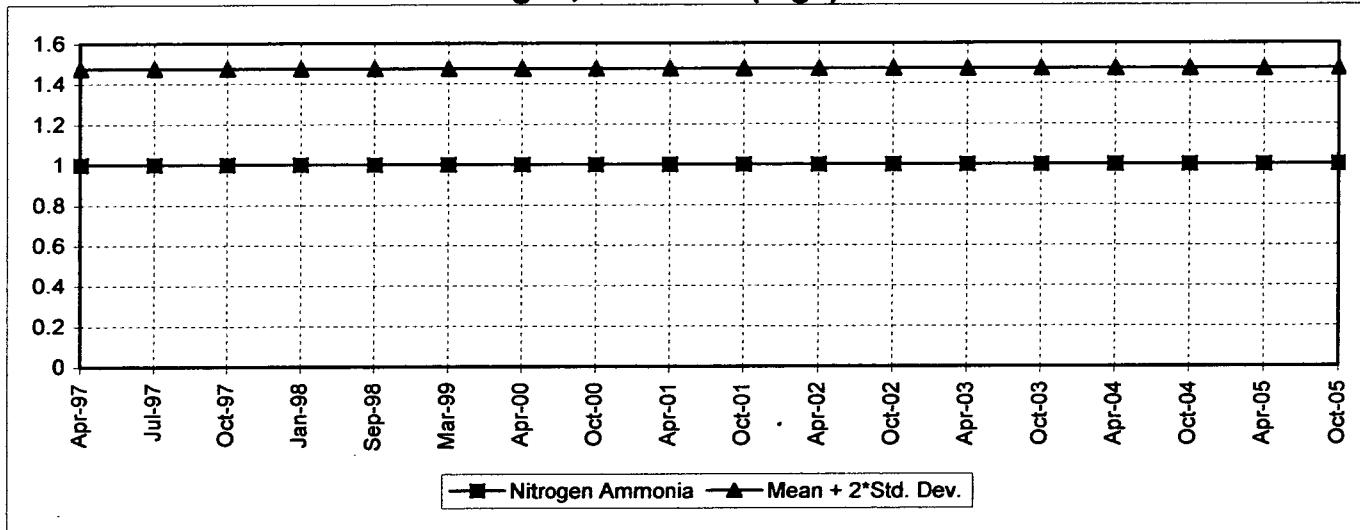
MW-92-1

Nitrogen, Ammonia (mg/l)



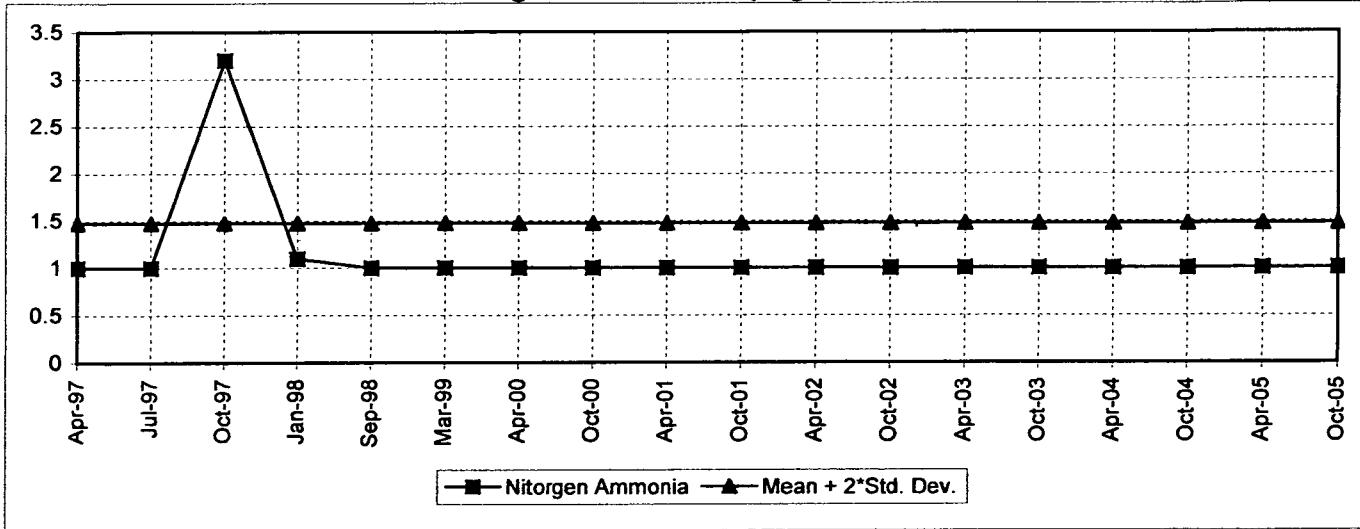
MW-92-4

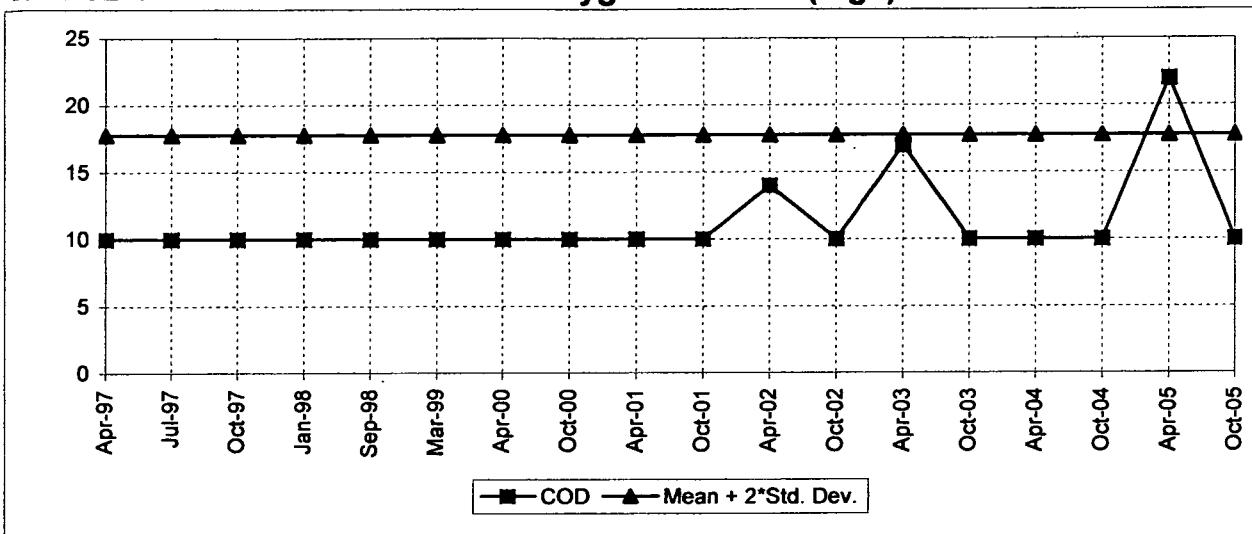
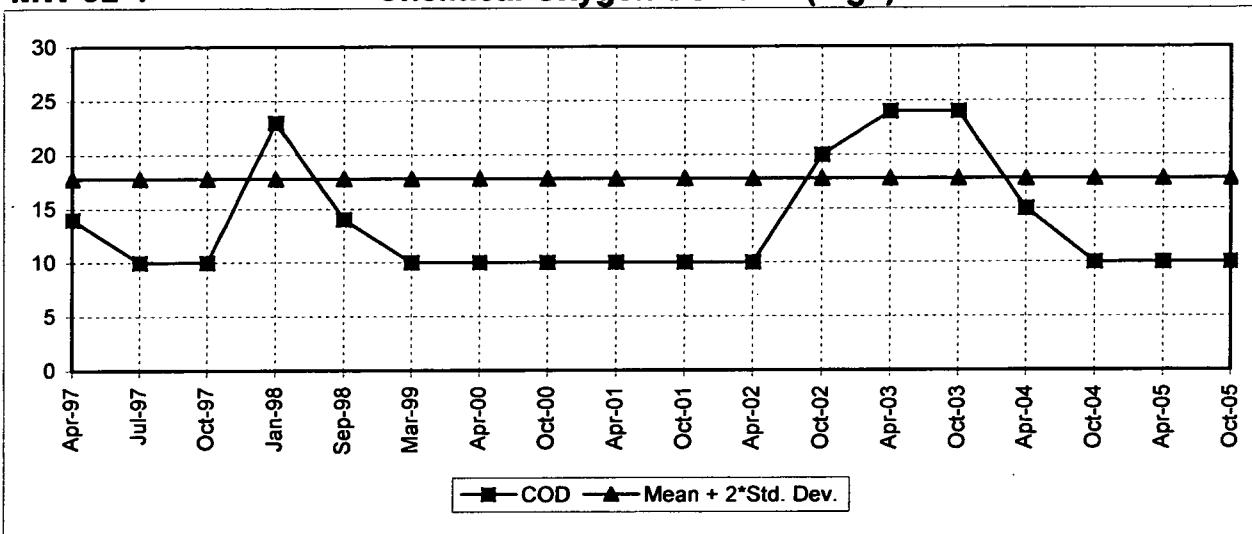
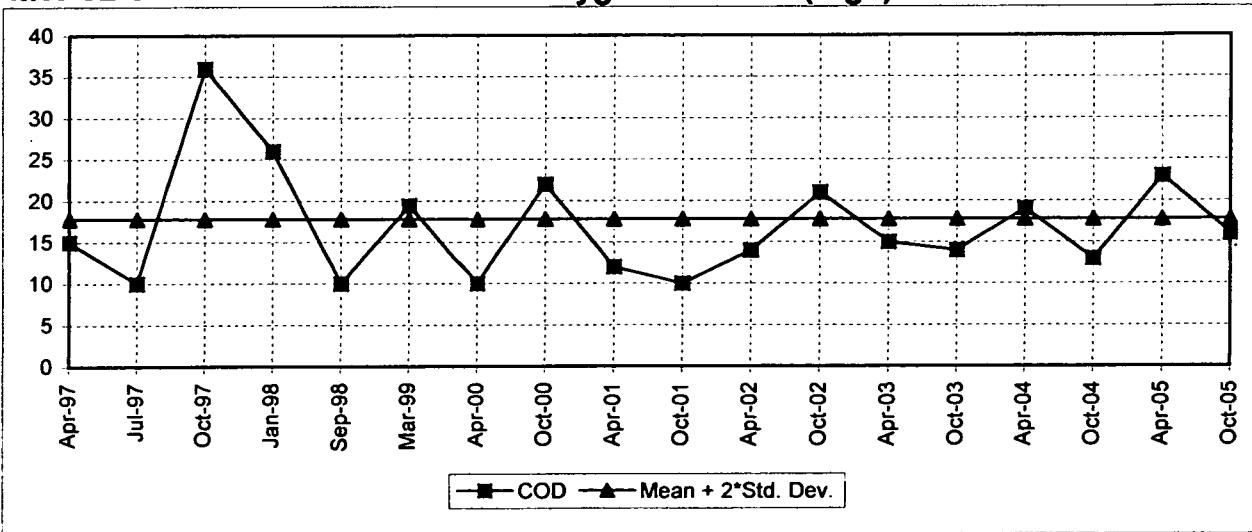
Nitrogen, Ammonia (mg/l)

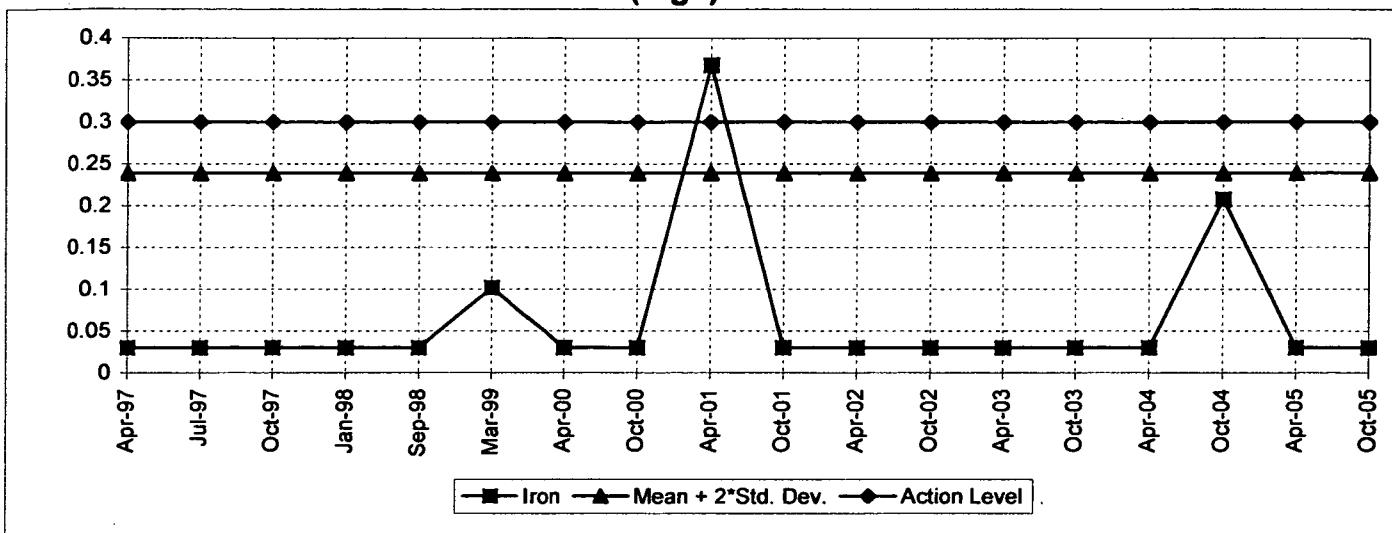
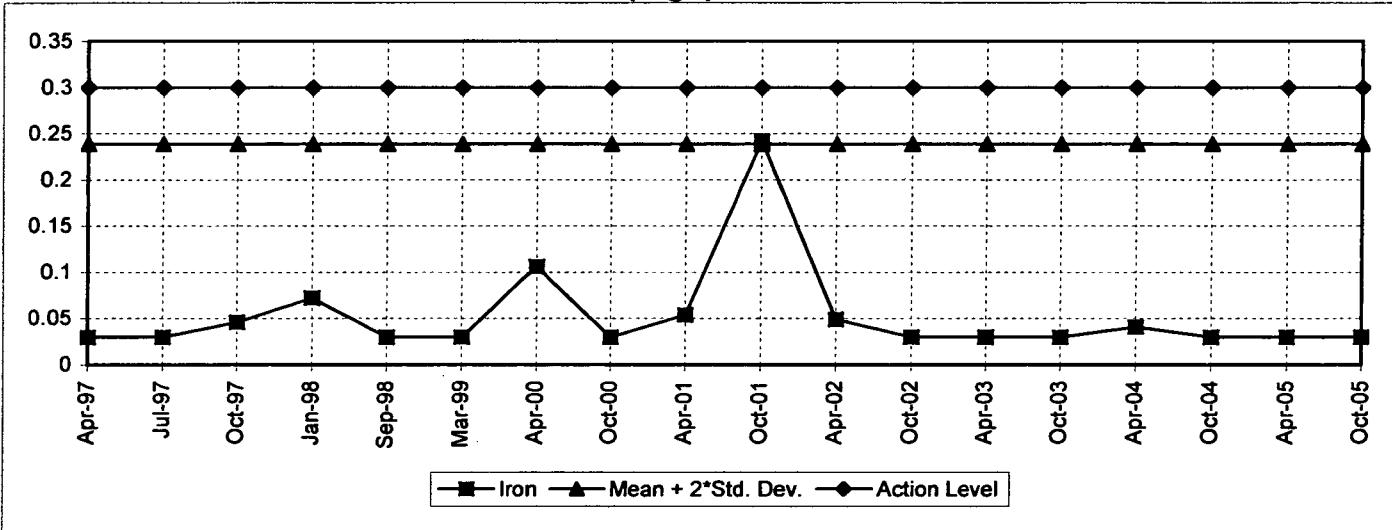
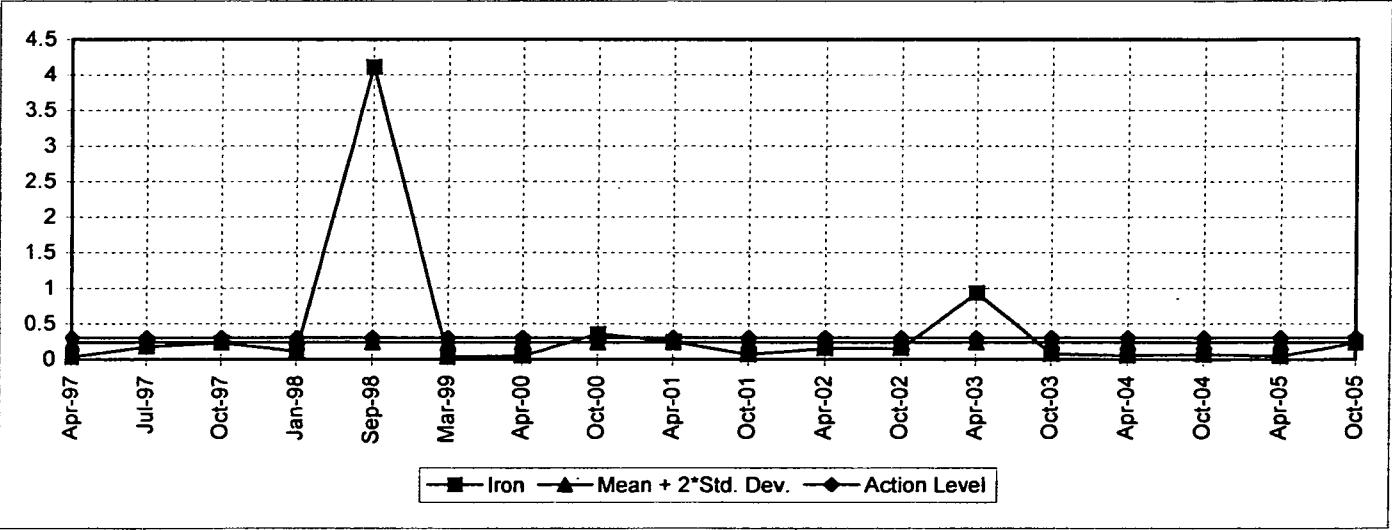


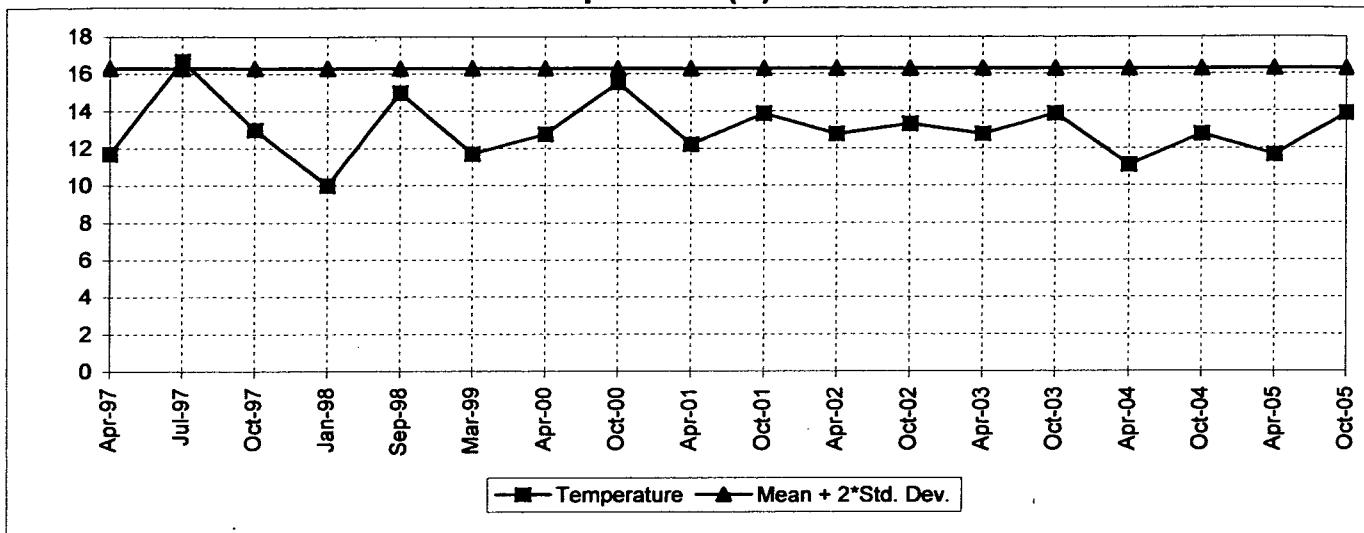
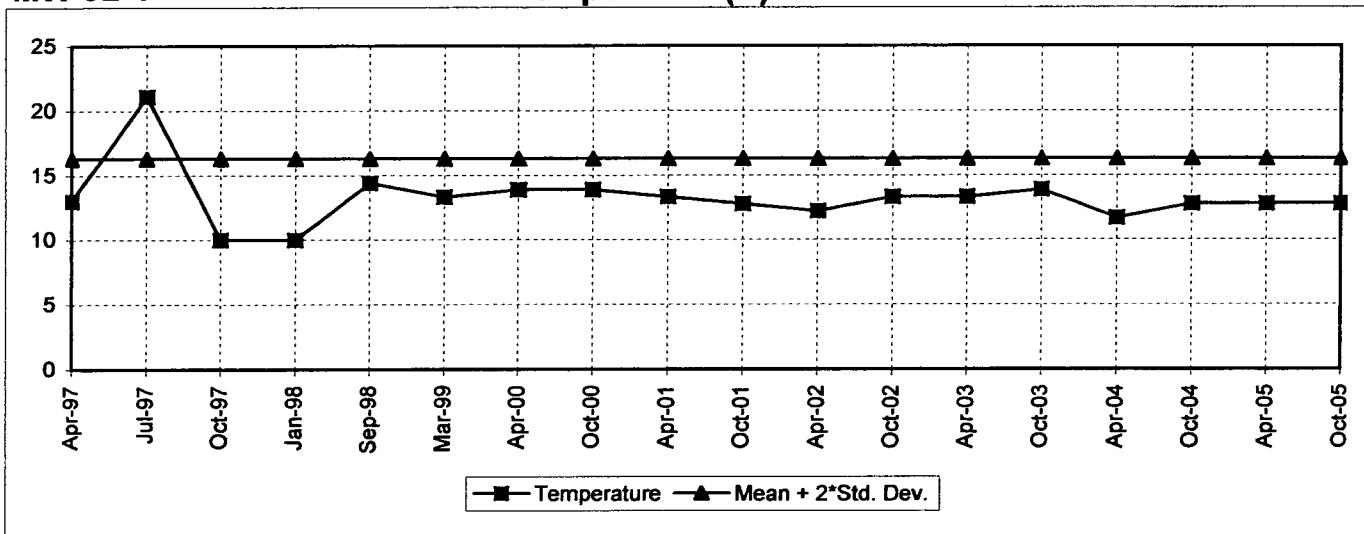
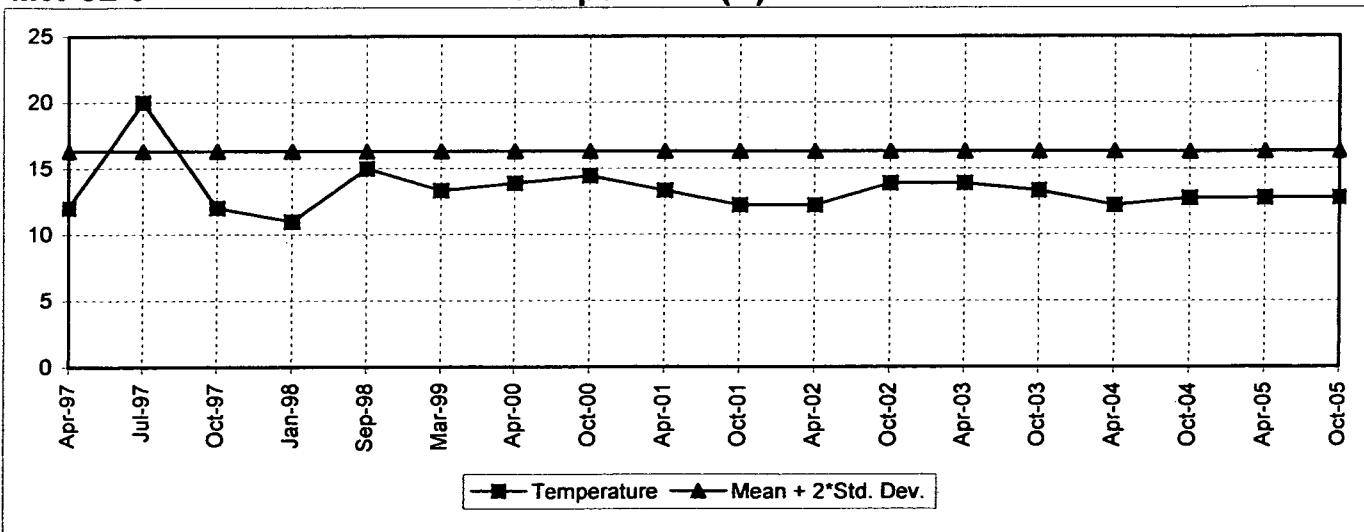
MW-92-6

Nitrogen, Ammonia (mg/l)



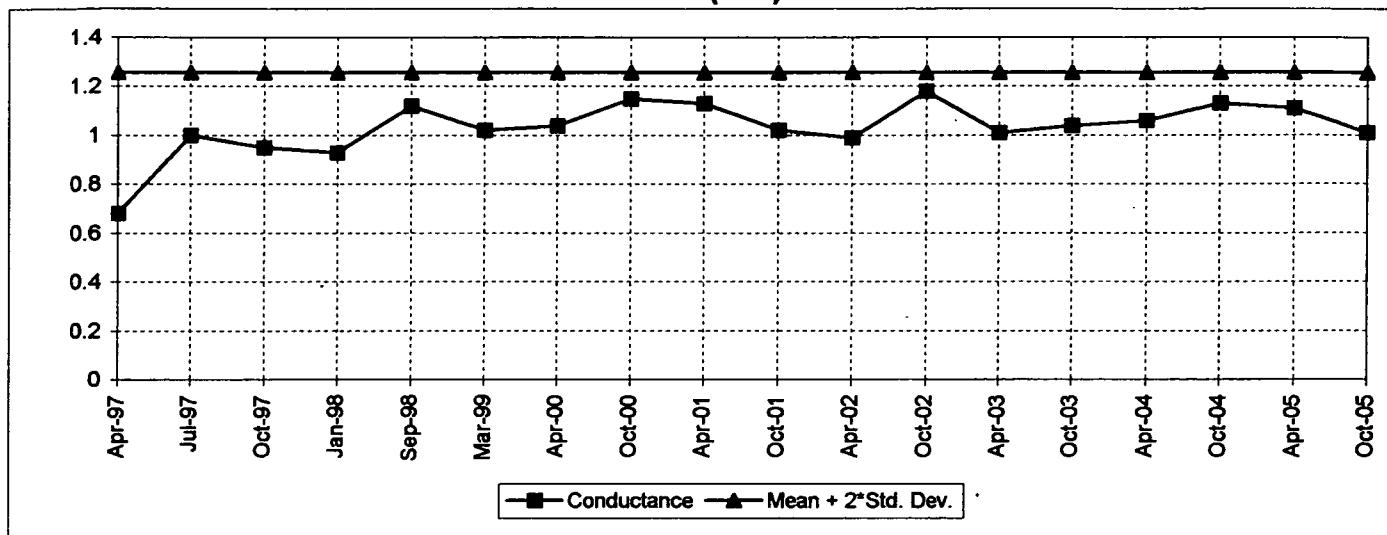
MW-92-1**Chemical Oxygen Demand (mg/l)****MW-92-4****Chemical Oxygen Demand (mg/l)****MW-92-6****Chemical Oxygen Demand (mg/l)**

MW-92-1**Iron (mg/l)****MW-92-4****Iron (mg/l)****MW-92-6****Iron (mg/l)**

MW-92-1**Temperature (C)****MW-92-4****Temperature (C)****MW-92-6****Temperature (C)**

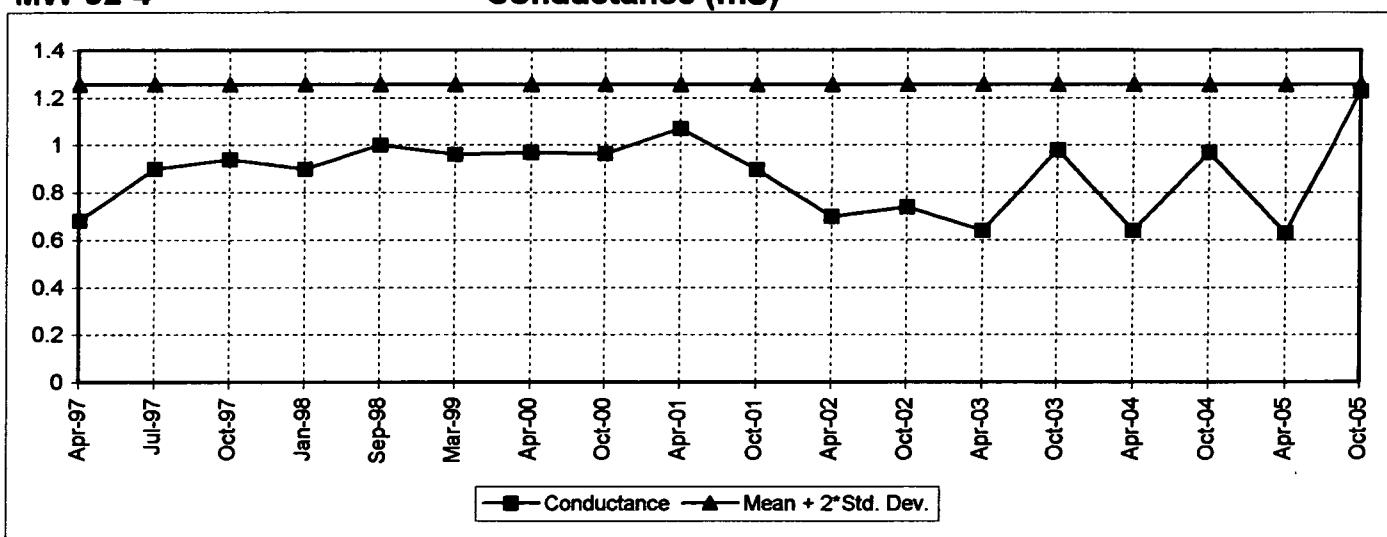
MW-92-1

Conductance (mS)



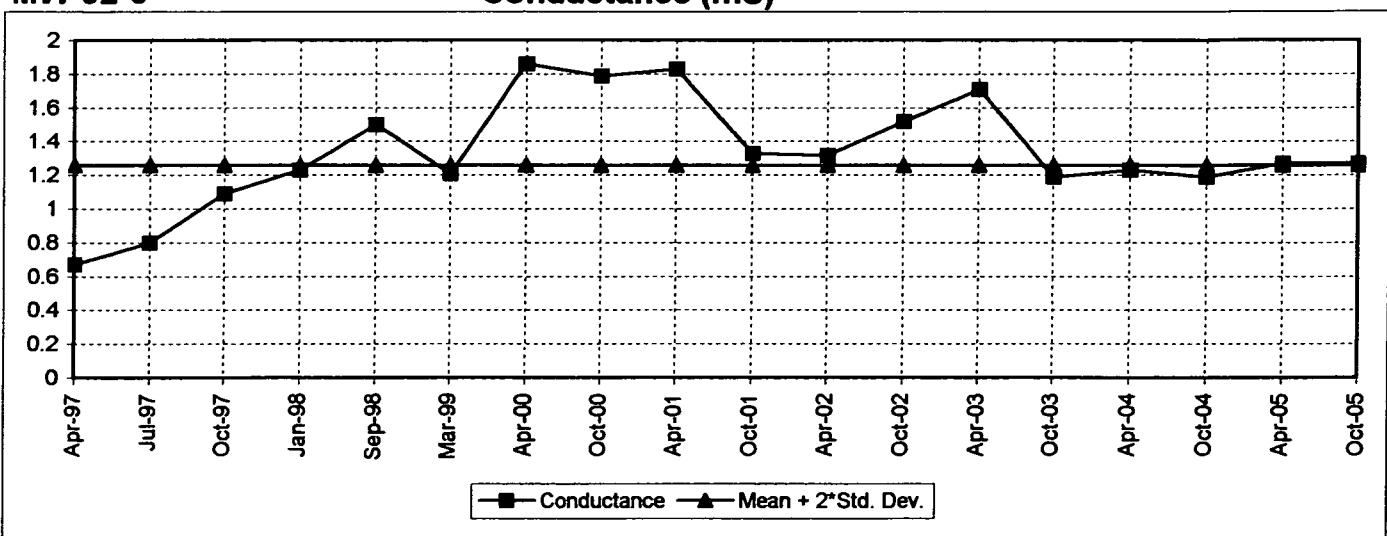
MW-92-4

Conductance (mS)



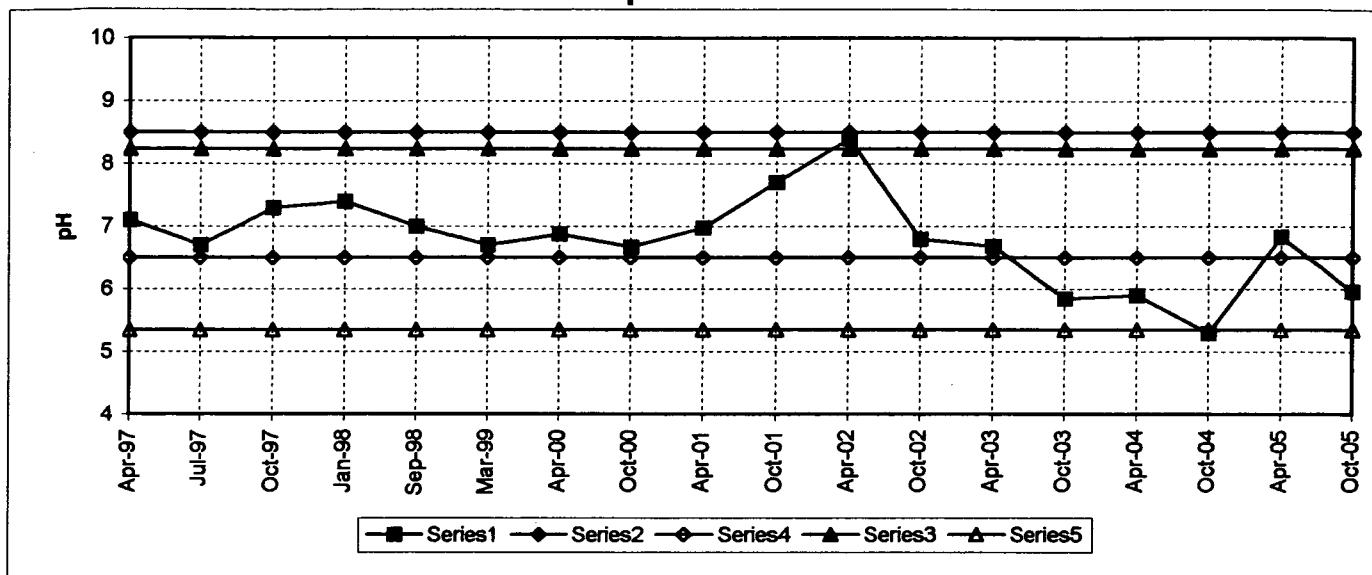
MW-92-6

Conductance (mS)



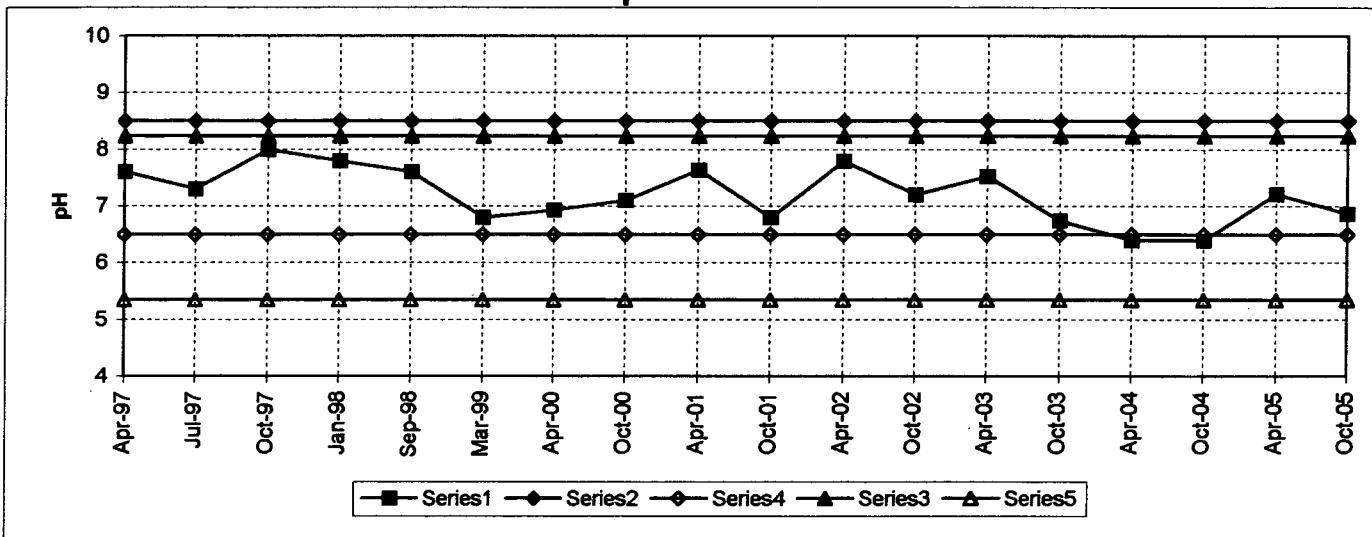
MW-92-1

pH



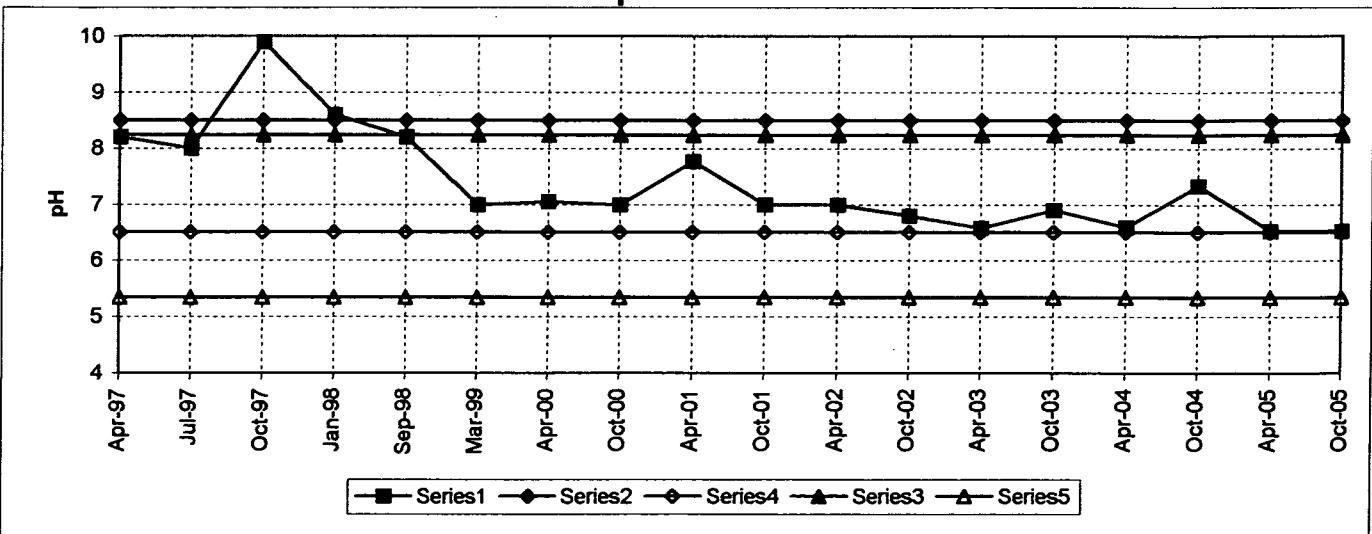
MW-92-4

pH



MW-92-6

pH



Lower Aquifer (Monitoring Wells are Deep) Sampling Result - 1997 to 2005

Arsenic, Dissolved (mg/L)

Date	<u>Upgradient</u>		<u>Downgradient</u>	
	MW-92-2		MW-92-5	MW-92-7
Apr-97	<0.001		<0.001	<0.001
Jul-97	<0.001		<0.001	<0.001
Oct-97	<0.001		<0.001	<0.001
Jan-98	0.001		<0.001	0.001
Mar-99	<0.001		<0.001	<0.001
Upgradient Mean + 2(Standard Deviation) =		0.0010	Action Level =	
				0.001 dNRL

Barium, Dissolved (mg/l)

Date	<u>Upgradient</u>		<u>Downgradient</u>	
	MW-92-2		MW-92-5	MW-92-7
Apr-97	0.139		0.090	0.150
Jul-97	0.101		0.073	0.088
Oct-97	0.113		0.090	0.120
Jan-98	0.145		0.104	0.167
Mar-99	0.112		0.19	0.164
Upgradient Mean + 2(Standard Deviation) =		0.1599	Action Level =	
				2 fHAL

Cadmium, Dissolved (mg/l)

Date	<u>Upgradient</u>		<u>Downgradient</u>	
	MW-92-2		MW-92-5	MW-92-7
Apr-97	0.002		<0.001	<0.001
Jul-97	0.001		0.002	<0.001
Oct-97	<0.001		<0.001	<0.001
Jan-98	<0.001		<0.001	<0.001
Mar-99	<0.001		<0.001	<0.001
Upgradient Mean + 2(Standard Deviation) =		0.0021	Action Level =	
				0.005 fHAL

Magnesium, Dissolved (mg/l)

Date	<u>Upgradient</u>		<u>Downgradient</u>	
	MW-92-2		MW-92-5	MW-92-7
Apr-97	48.5		49	57
Jul-97	48.1		47.6	32.5
Oct-97	46.8		46.8	43.8
Jan-98	49.0		50	61
Mar-99	41.6		47.4	55.7
Upgradient Mean + 2(Standard Deviation) =		52.8382	Action Level =	
				None

Zinc, Dissolved (mg/l)

Date	<u>Upgradient</u>		<u>Downgradient</u>	
	MW-92-2		MW-92-5	MW-92-7
Apr-97	<0.03		<0.03	0.03
Jul-97	<0.047		0.083	0.072
Oct-97	0.03		0.032	<0.03
Jan-98	<0.03		<0.03	<0.03
Mar-99	<0.03		<0.03	<0.03
Upgradient Mean + 2(Standard Deviation) =		0.0486	Action Level =	
				2 fHAL

Chloride (mg/l)

Date	<u>Upgradient</u>		<u>Downgradient</u>	
	MW-92-2		MW-92-5	MW-92-7
Apr-97	79		69	51
Jul-97	77		75	98
Oct-97	68		78	72
Jan-98	82		85	50
Sep-98	81.2		75	54
Mar-99	80		64	57
Apr-00	27		58	41
Oct-00	51		63	46
Apr-01	68		68	39
Oct-01	69		74	52
Apr-02	62		61	52
Oct-02	71		69	58
Apr-03	36		71	58
Oct-03	70		66	113
Apr-04	73		68	53
Oct-04	72		68	49
Apr-05	40		56	61
Oct-05	50		52	55

Upgradient Mean + 2(Standard Deviation) = 97.32 Action Level = 250 fSMCL

Nitrogen, Ammonia (mg/l)

Date	<u>Upgradient</u>		<u>Downgradient</u>	
	MW-92-2		MW-92-5	MW-92-7
Apr-97	<1		<1	<1
Jul-97	<1		<1	<1
Oct-97	<1		<1	<1
Jan-98	<1		<1	<1
Sep-98	<1		<1	<1
Mar-99	<1		<1	<1
Apr-00	<1		<1	<1
Oct-00	<1		<1	<1
Apr-01	<1		<1	<1
Oct-01	<1		<1	<1
Apr-02	<1		<1	<1
Oct-02	<1		<1	<1
Apr-03	<1		<1	<1
Oct-03	<1		<1	<1
Apr-04	<1		<1	<1
Oct-04	<1		<1	<1
Apr-05	<1		<1	<1
Oct-05	<1		<1	<1

Upgradient Mean + 2(Standard Deviation) = 1.00 Action Level = 30 fSMCL

Iron, Dissolved (mg/l)

Date	<u>Upgradient</u>		<u>Downgradient</u>	
	MW-92-2		MW-92-5	MW-92-7
Apr-97	8.72		8.14	7.54
Jul-97	0.12		<0.03	0.04
Oct-97	2.76		6.65	0.06
Jan-98	9.70		9.06	8.27
Sep-98	8.35		8.50	4.12
Mar-99	8.37		7.86	6.52
Apr-00	0.56		3.20	3.23
Oct-00	<0.03		7.32	6.82
Apr-01	7.06		7.62	7.24
Oct-01	8.06		7.72	8.21
Apr-02	7.62		7.13	6.33
Oct-02	6.33		3.10	5.24
Apr-03	<0.03		0.82	6.24
Oct-03	6.29		<0.030	5.96
Apr-04	7.67		5.95	1.25
Oct-04	7.21		<0.03	6.33
Apr-05	3.82		5.78	5.05
Oct-05	7.05		6.07	5.50

Upgradient Mean + 2(Standard Deviation) = **12.27** Action Level = **0.3 f action level**

Chemical Oxygen Demand (mg/l)

Date	<u>Upgradient</u>		<u>Downgradient</u>	
	MW-92-2		MW-92-5	MW-92-7
Apr-97	<10		<10	19
Jul-97	<10		<10	<10
Oct-97	<10		<10	<10
Jan-98	<10		<10	<10
Sep-98	<10		<10	<10
Mar-99	<10		<10	<10
Apr-00	<10		<10	<10
Oct-00	<10		<10	<10
Apr-01	<10		<10	<10
Oct-01	<10		<10	14
Apr-02	<10		<10	11
Oct-02	11		11	14
Apr-03	18		<10	25
Oct-03	<10		<10	12
Apr-04	17		16	20
Oct-04	<10		<10	<10
Apr-05	16		15	28
Oct-05	14		16	11

Upgradient Mean + 2(Standard Deviation) = **14.89** Action Level = **None**

Conductance (mS)

Date	<u>Upgradient</u>		<u>Downgradient</u>	
	MW-92-2		MW-92-5	MW-92-7
Apr-97	0.83		0.85	0.88
Jul-97	0.90		1.10	0.80
Oct-97	1.12		1.16	1.21
Jan-98	1.15		1.17	1.26
Sep-98	1.21		1.27	1.50
Mar-99	1.22		1.36	1.43
Apr-00	1.00		1.19	1.28
Oct-00	1.18		1.18	1.24
Apr-01	1.17		1.19	1.22
Oct-01	1.20		1.21	1.26
Apr-02	1.08		1.05	1.09
Oct-02	1.18		1.20	1.35
Apr-03	1.05		1.16	1.27
Oct-03	1.16		1.12	1.22
Apr-04	1.19		1.19	1.32
Oct-04	1.04		0.99	1.08
Apr-05	1.15		1.21	1.15
Oct-05	1.11		1.10	1.15

Upgradient Mean + 2(Standard Deviation) = **1.3244** Action Level = None

pH

Date	<u>Upgradient</u>		<u>Downgradient</u>	
	MW-92-2		MW-92-5	MW-92-7
Apr-97	7.5		7.3	6.9
Jul-97	7.6		7.2	6.9
Oct-97	7.4		7.7	7.6
Jan-98	7.5		7.2	7.2
Sep-98	7.2		7.2	7.2
Mar-99	6.4		6.8	6.7
Apr-00	7.1		6.8	6.6
Oct-00	6.7		6.8	6.8
Apr-01	7.1		7.4	7.3
Oct-01	7.6		6.7	7.3
Apr-02	8.7		7.3	6.2
Oct-02	6.8		6.8	6.7
Apr-03	6.7		6.9	6.9
Oct-03	6.2		6.5	6.6
Apr-04	6.2		6.3	6.2
Oct-04	5.6		6.8	6.7
Apr-05	6.4		6.3	6.5
Oct-05	6.3		6.3	6.2

Upgradient Mean + 2(Standard Deviation) = **8.4005** Upper Action Level = **8.5 fSMCL**
 Upgradient Mean - 2(Standard Deviation) = **5.4895** Lower Action Level = **6.5 fSMCL**

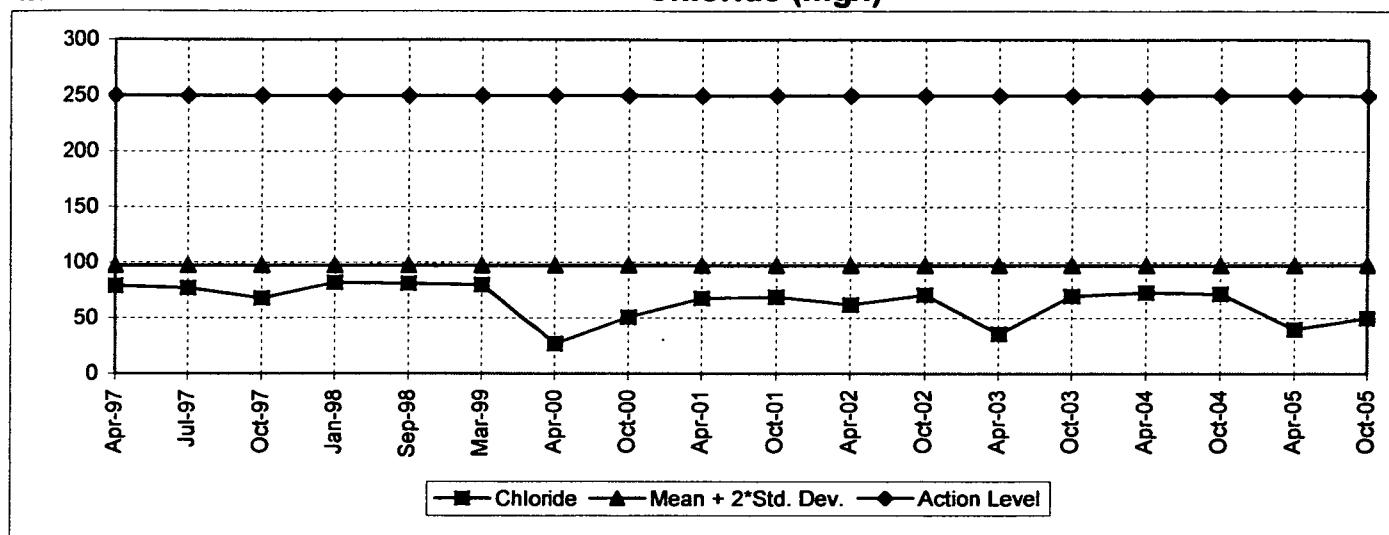
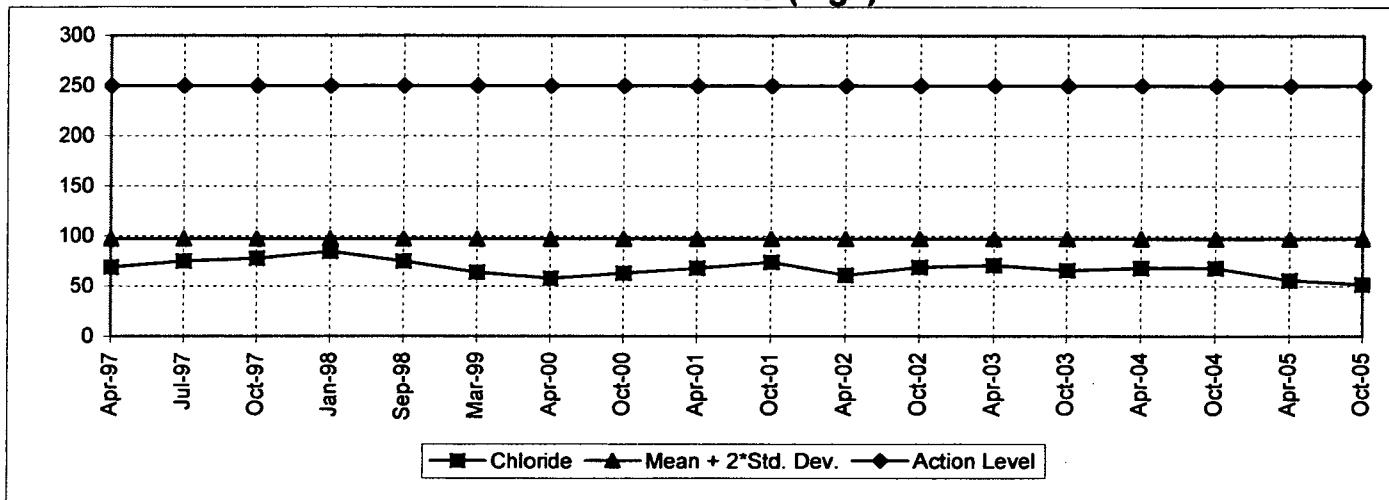
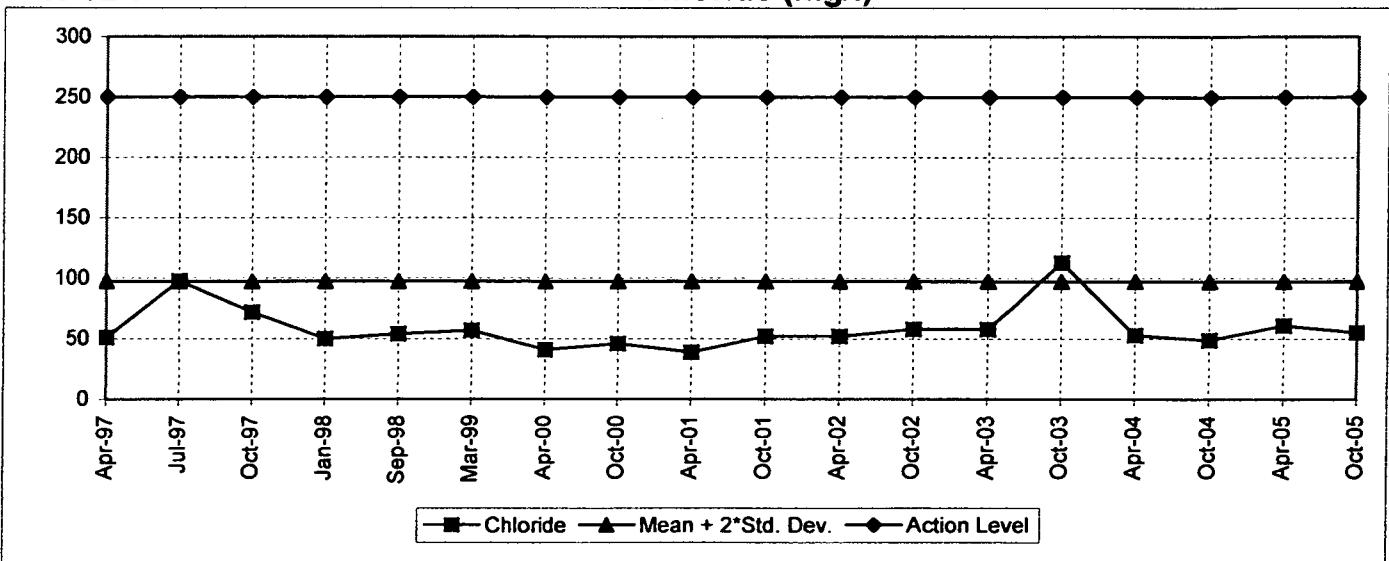
Temperature (C)

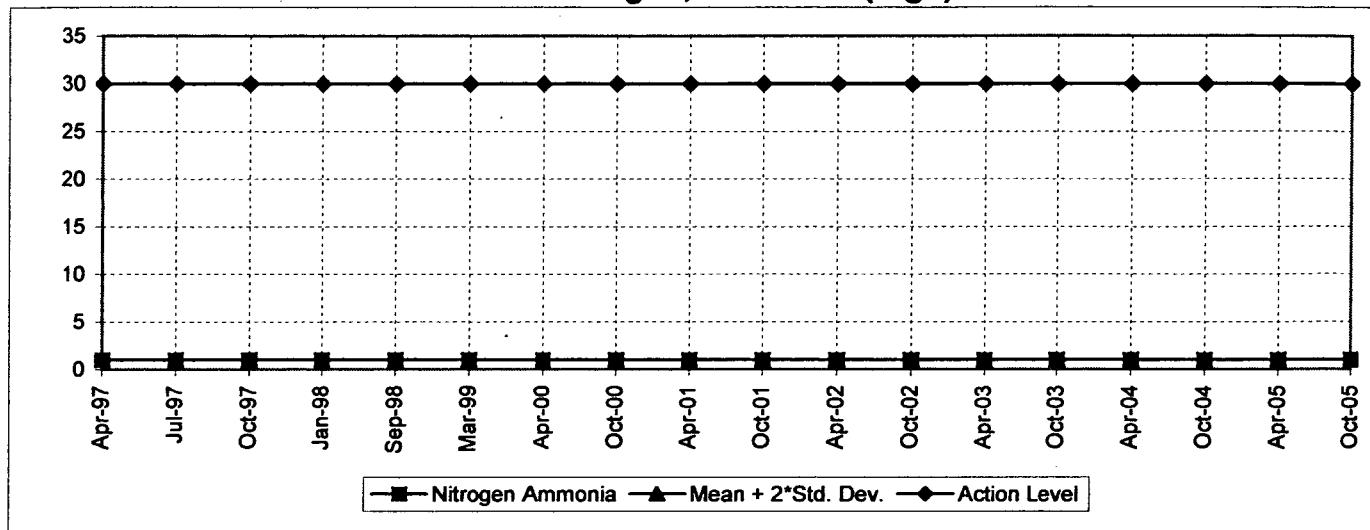
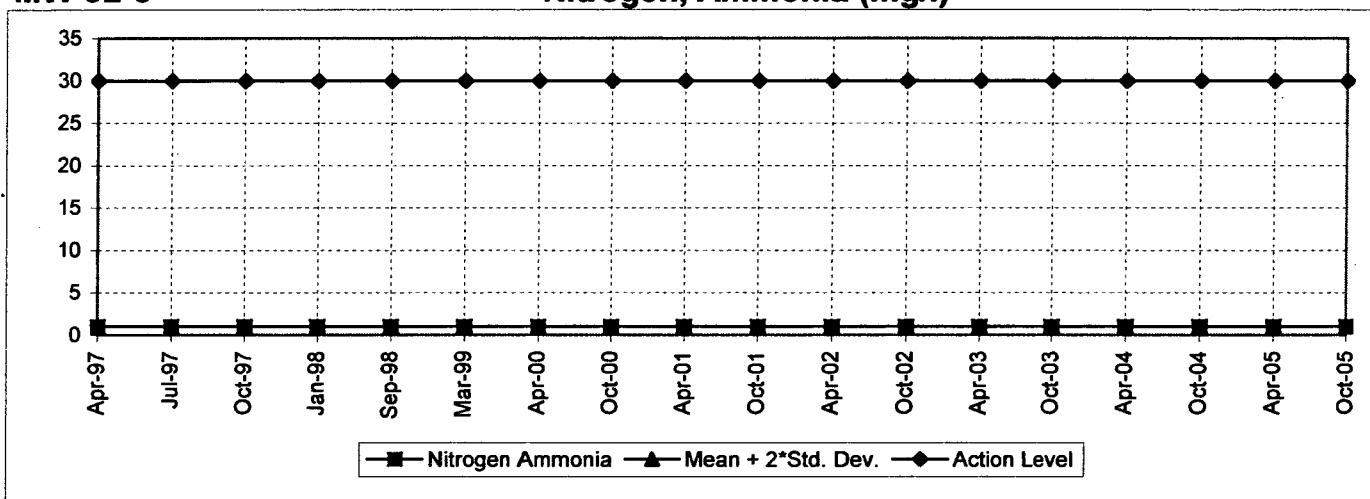
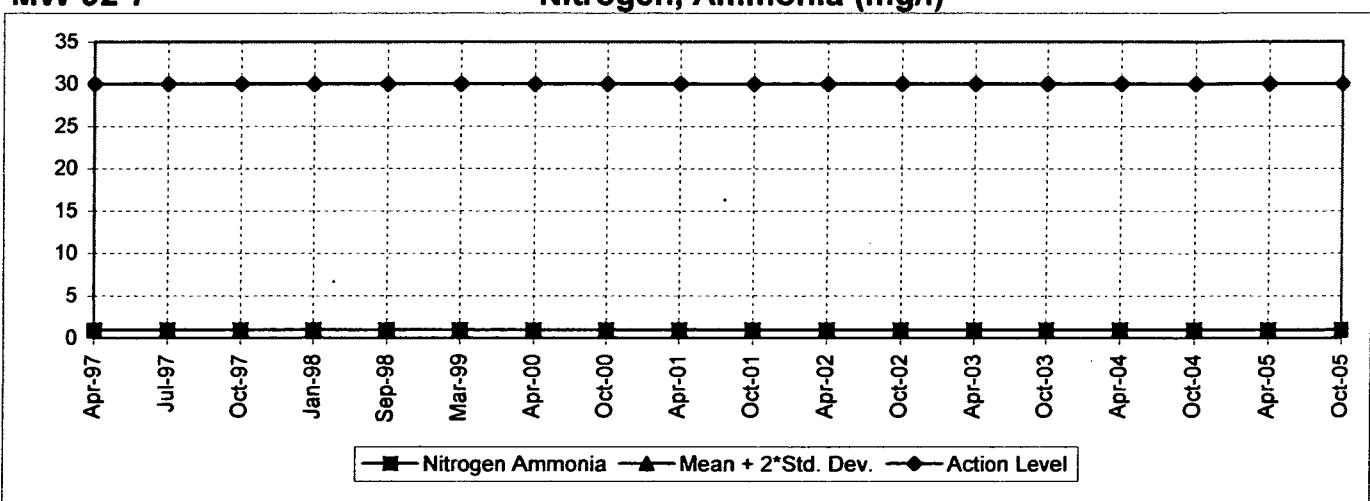
Date	<u>Upgradient</u>	<u>Downgradient</u>	
	MW-92-2	MW-92-5	MW-92-7
Apr-97	11.70	13.00	12.00
Jul-97	17.80	18.30	17.80
Oct-97	12.00	10.00	10.00
Jan-98	11.00	8.00	11.00
Sep-98	13.88	13.33	13.33
Mar-99	12.22	12.77	12.22
Apr-00	12.77	14.44	13.88
Oct-00	15.55	13.88	14.44
Apr-01	12.77	13.33	13.33
Oct-01	12.77	12.77	13.33
Apr-02	12.77	12.22	12.22
Oct-02	13.33	13.33	13.33
Apr-03	13.88	13.88	13.33
Oct-03	13.33	13.33	13.33
Apr-04	12.22	11.67	12.22
Oct-04	13.89	12.78	12.78
Apr-05	11.67	12.78	12.78
Oct-05	12.78	12.78	12.78

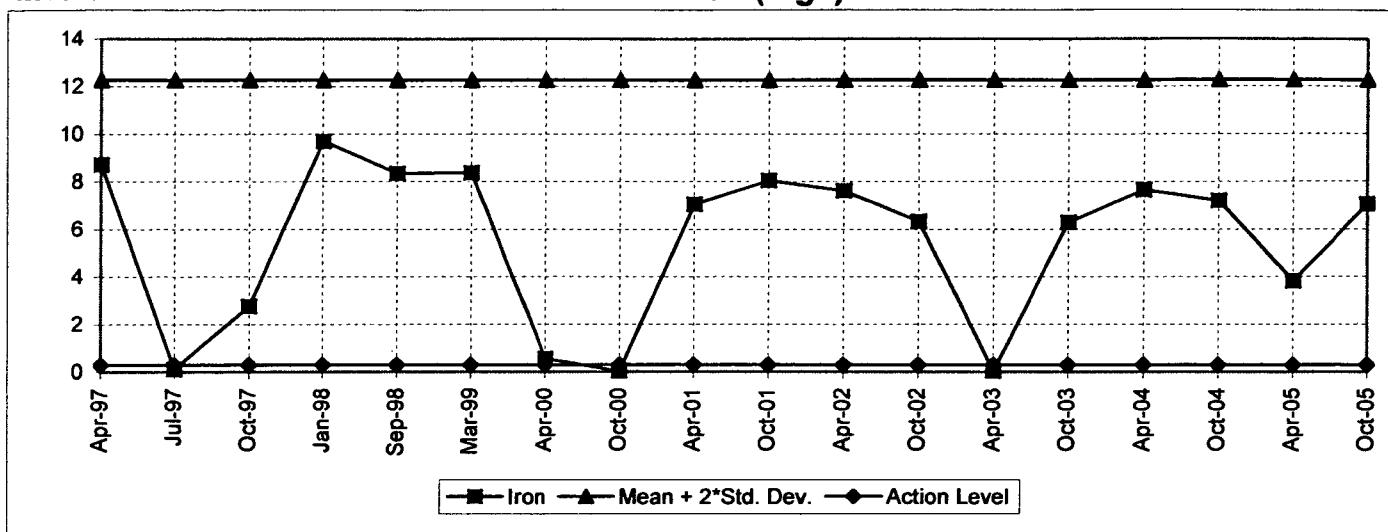
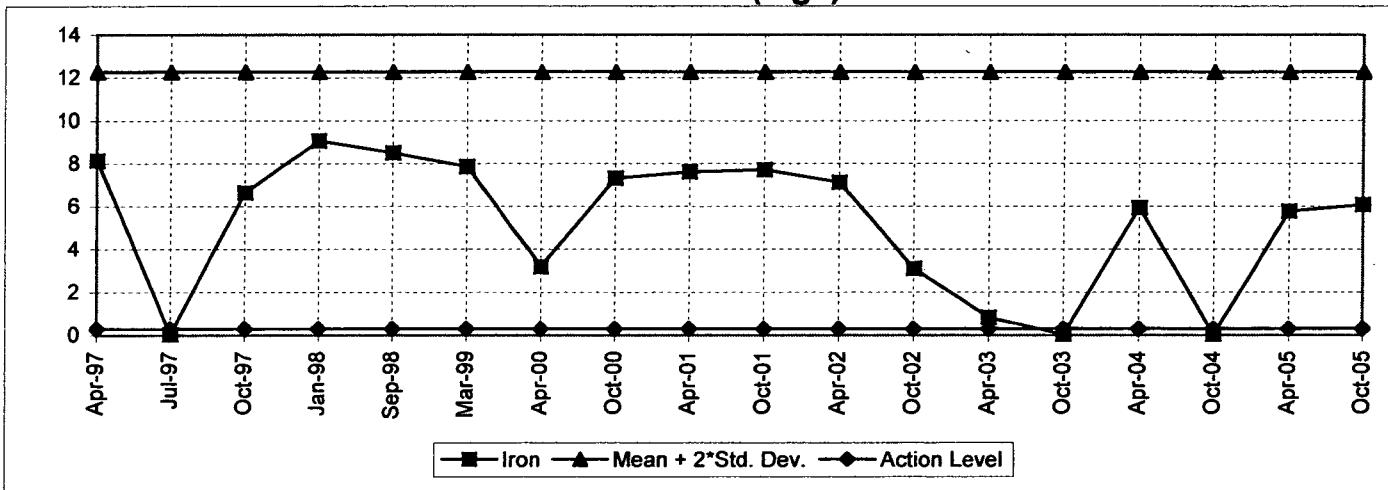
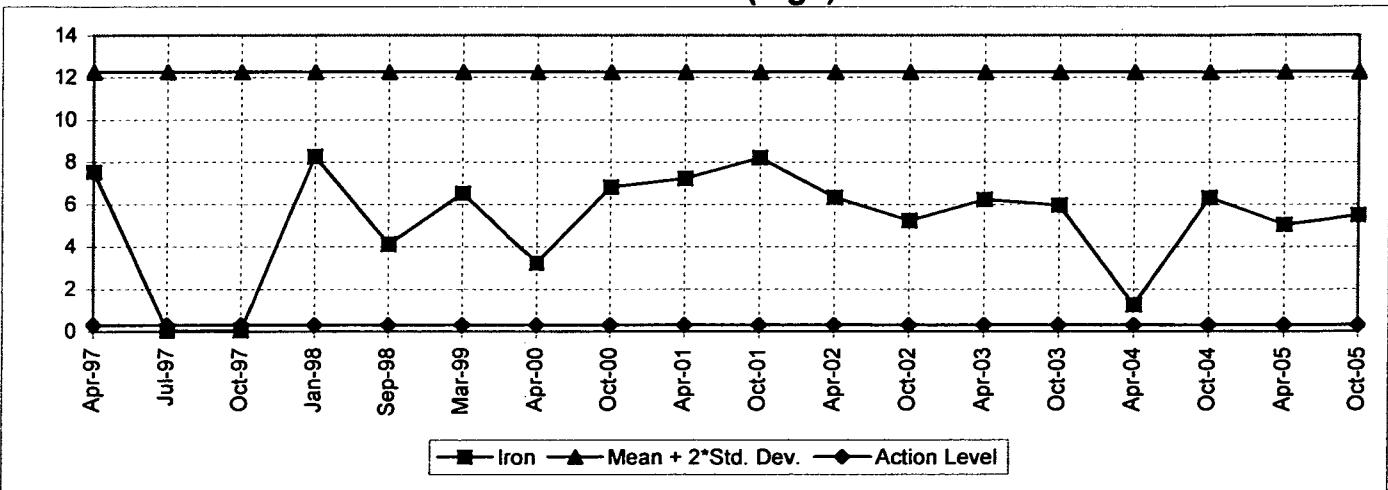
Upgradient Mean + 2(Standard Deviation) = **16.2631**

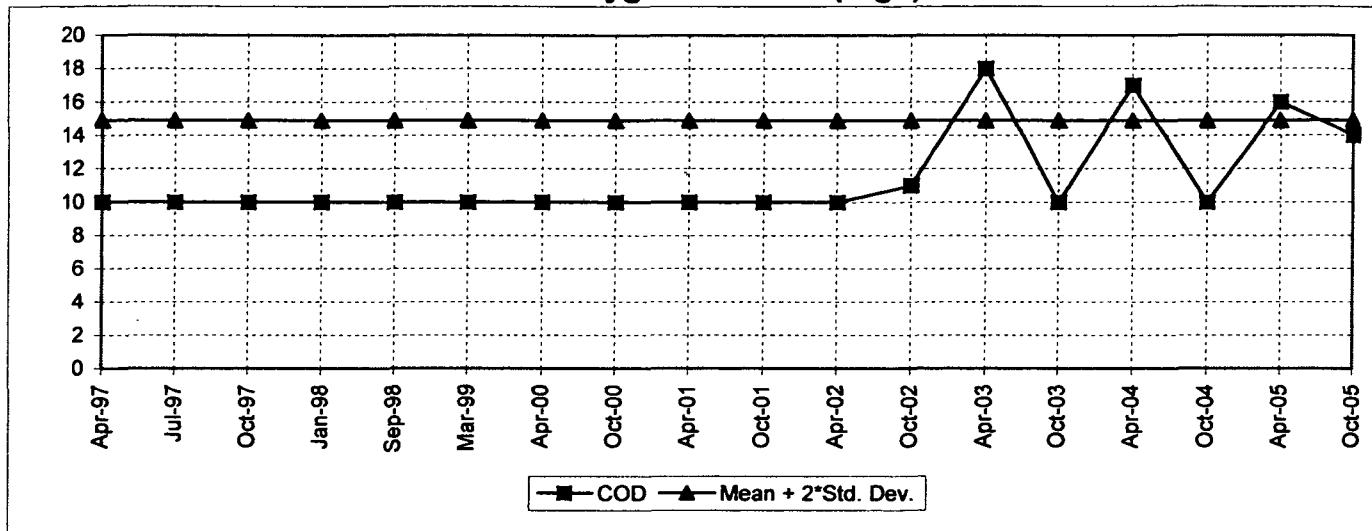
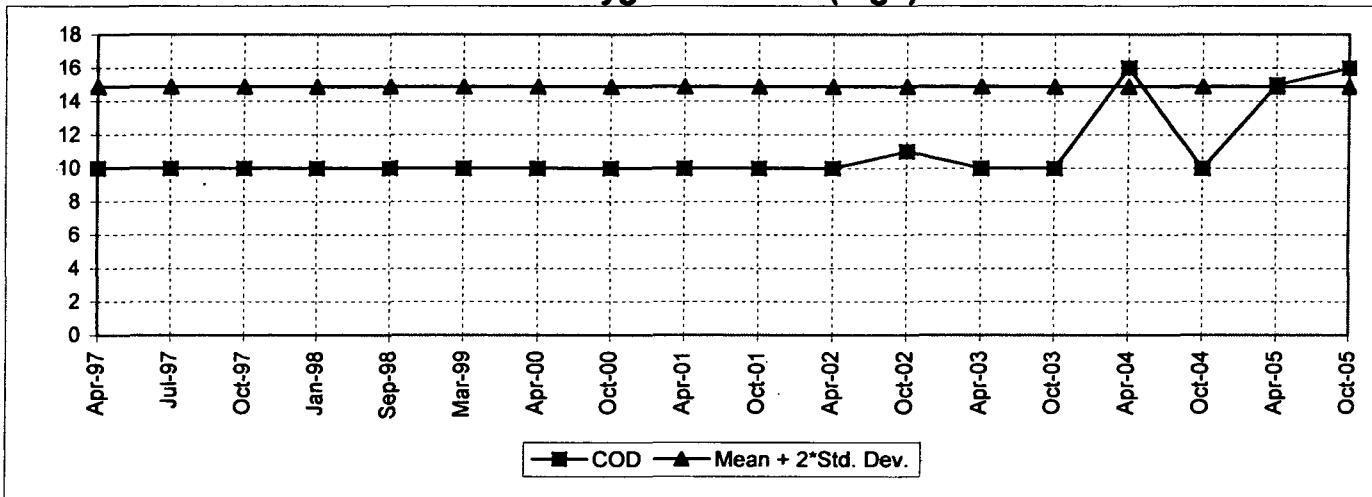
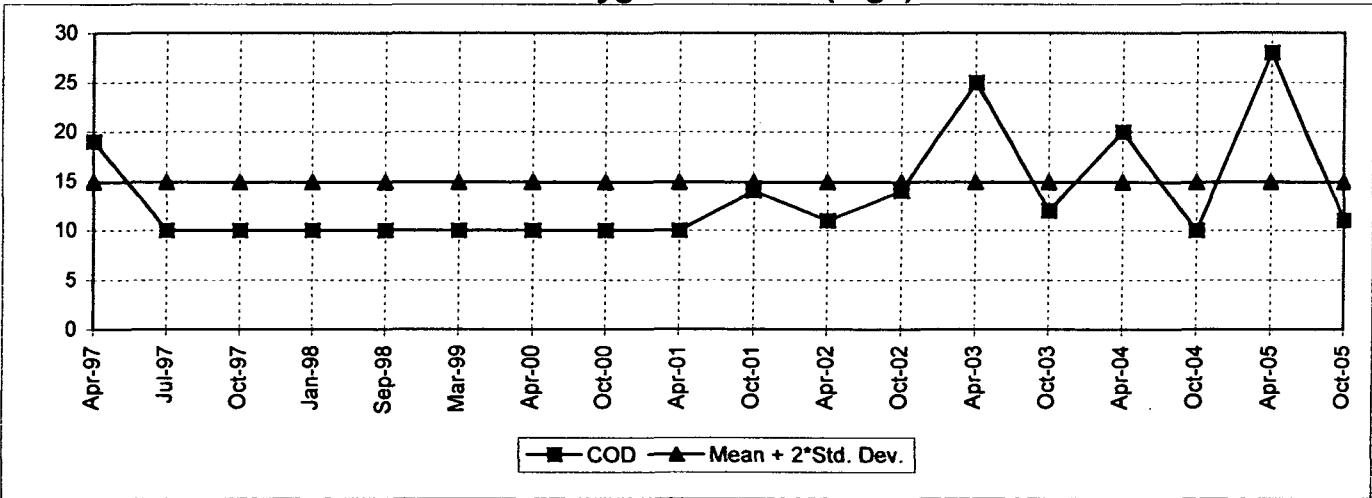
Action Level =

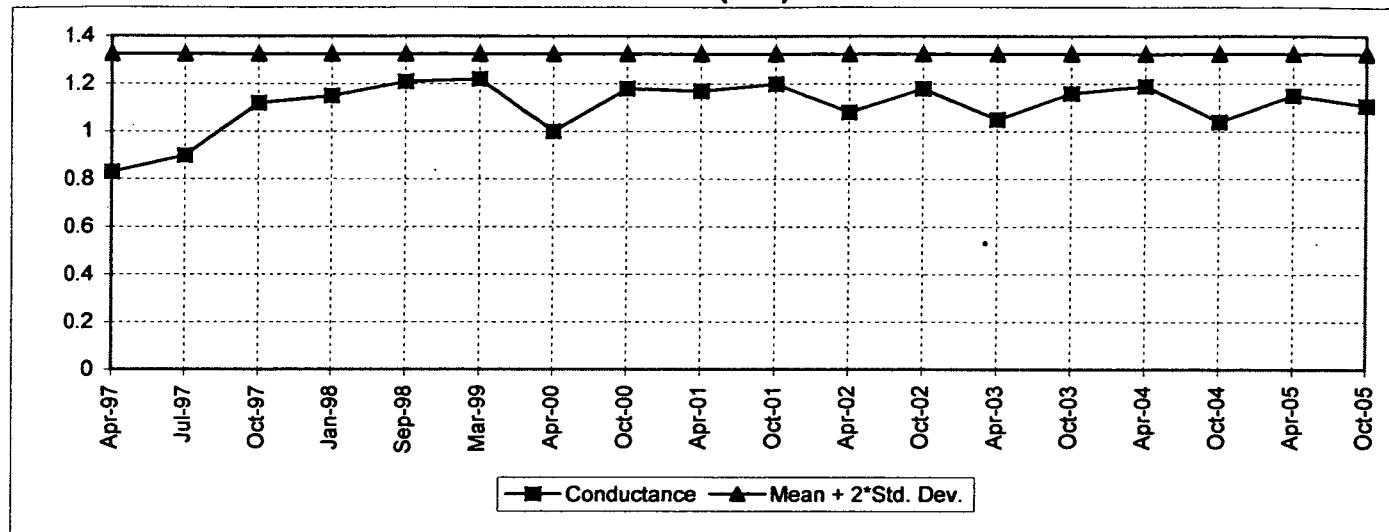
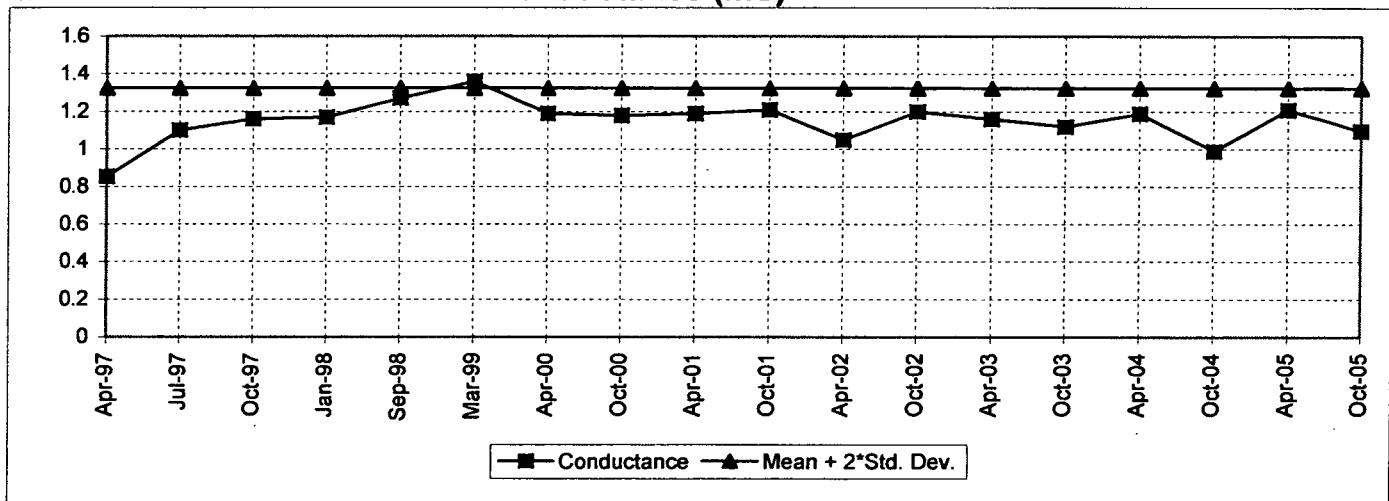
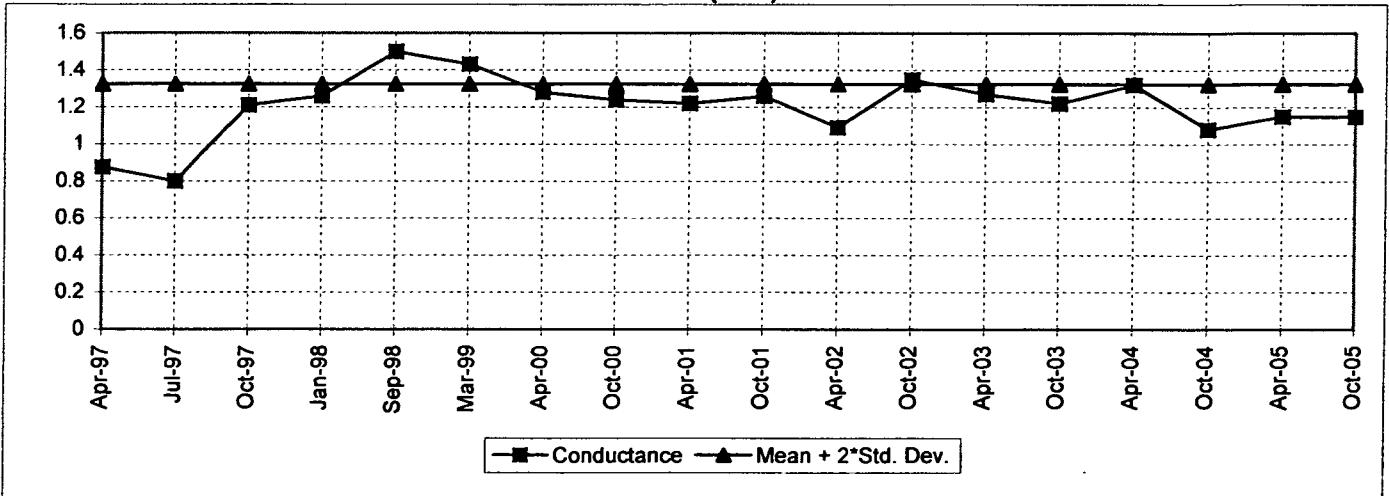
None

MW-92-2**Chloride (mg/l)****MW-92-5****Chloride (mg/l)****MW-92-7****Chloride (mg/l)**

MW-92-2**Nitrogen, Ammonia (mg/l)****MW-92-5****Nitrogen, Ammonia (mg/l)****MW-92-7****Nitrogen, Ammonia (mg/l)**

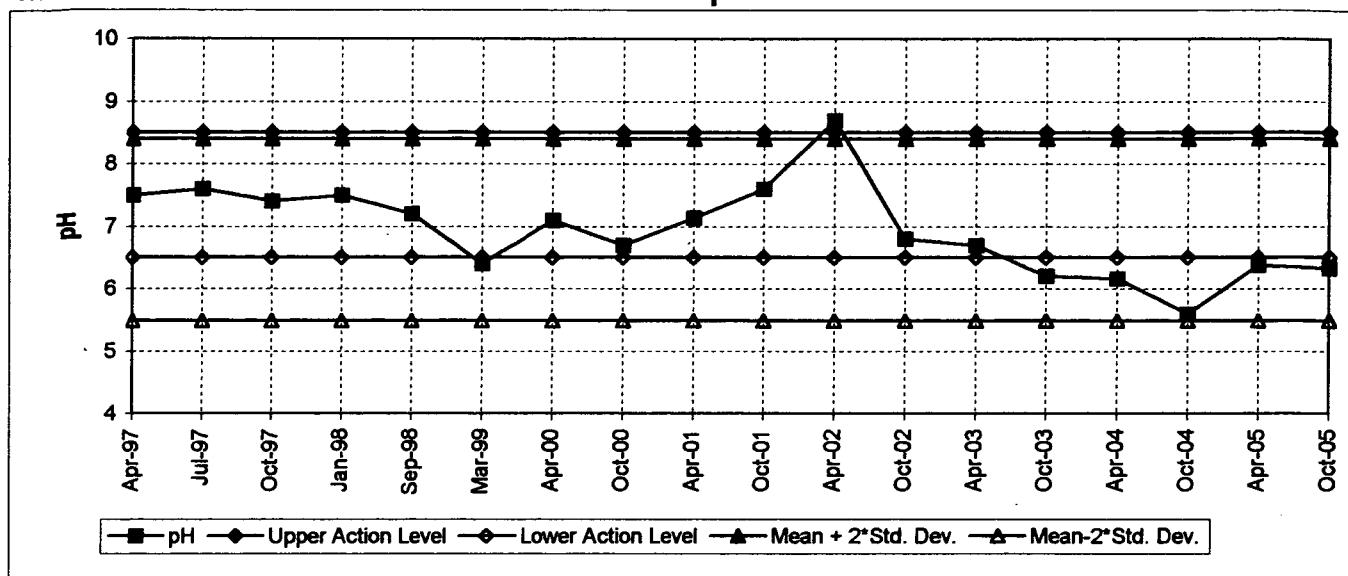
MW-92-2**Iron (mg/l)****MW-92-5****Iron (mg/l)****MW-92-7****Iron (mg/l)**

MW-92-2**Chemical Oxygen Demand (mg/l)****MW-92-5****Chemical Oxygen Demand (mg/l)****MW-92-7****Chemical Oxygen Demand (mg/l)**

MW-92-2**Conductance (mS)****MW-92-5****Conductance (mS)****MW-92-7****Conductance (mS)**

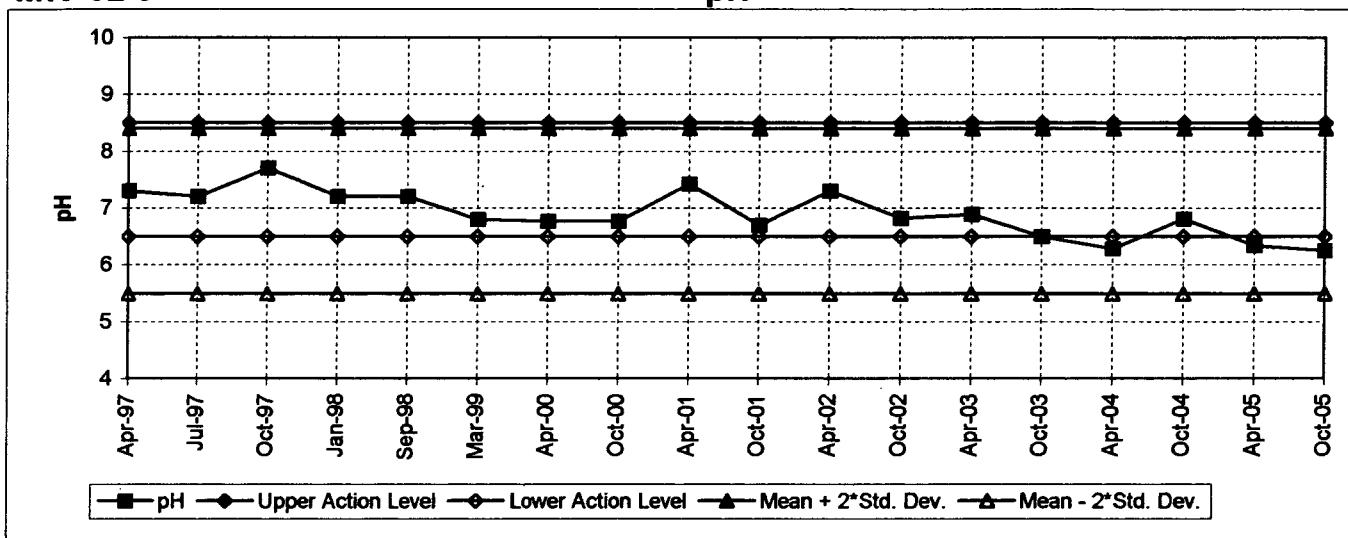
MW-92-2

pH



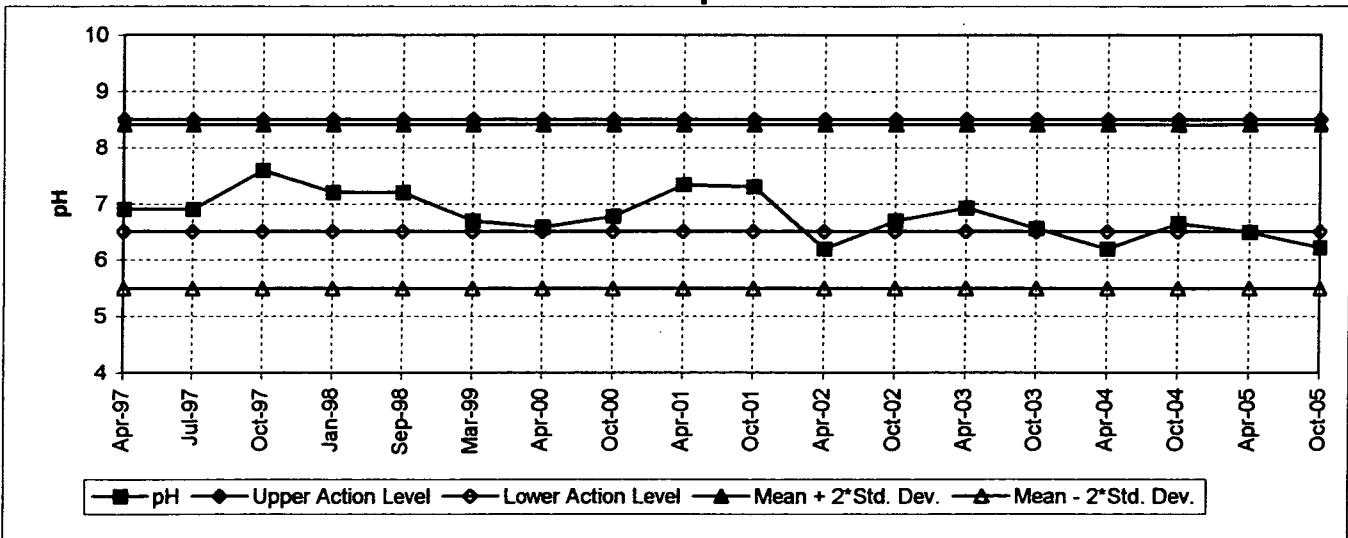
MW-92-5

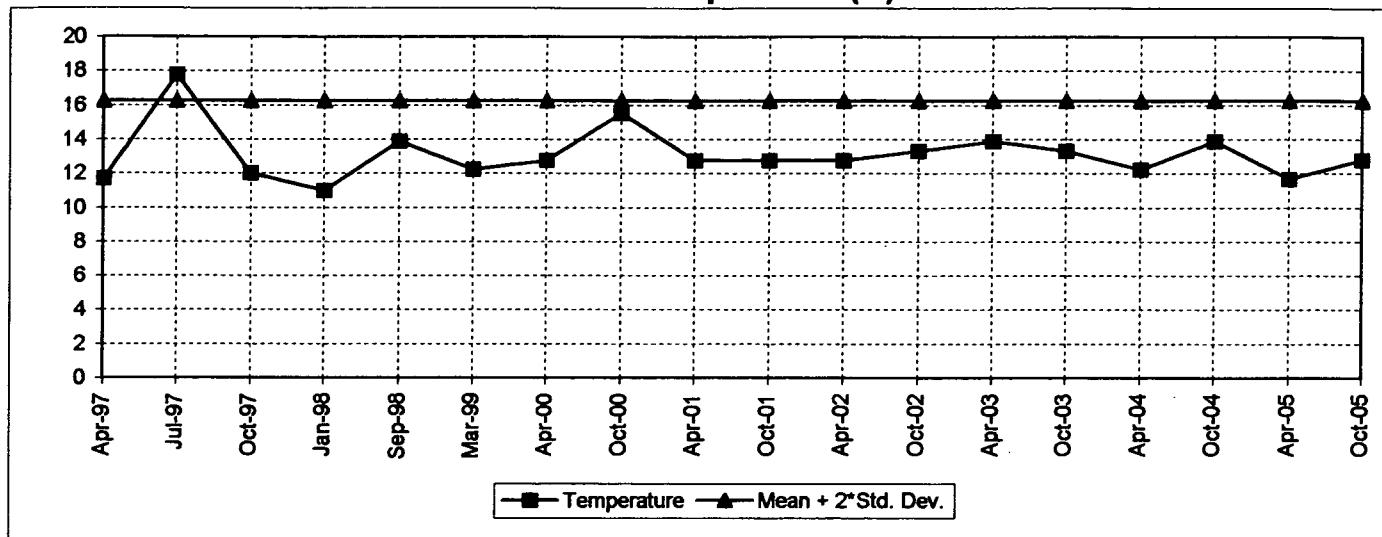
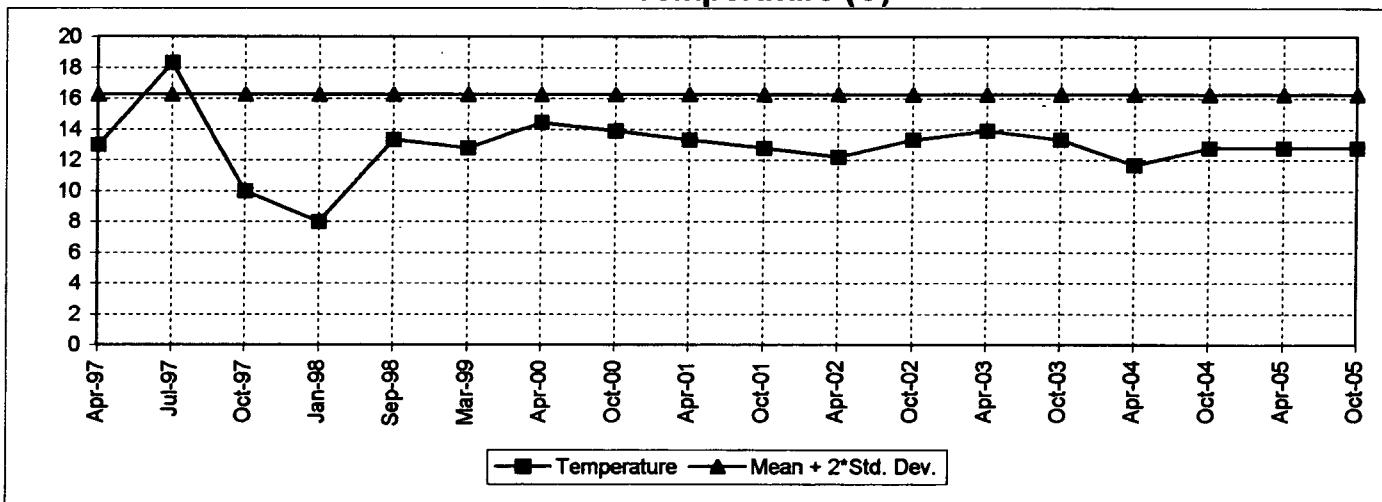
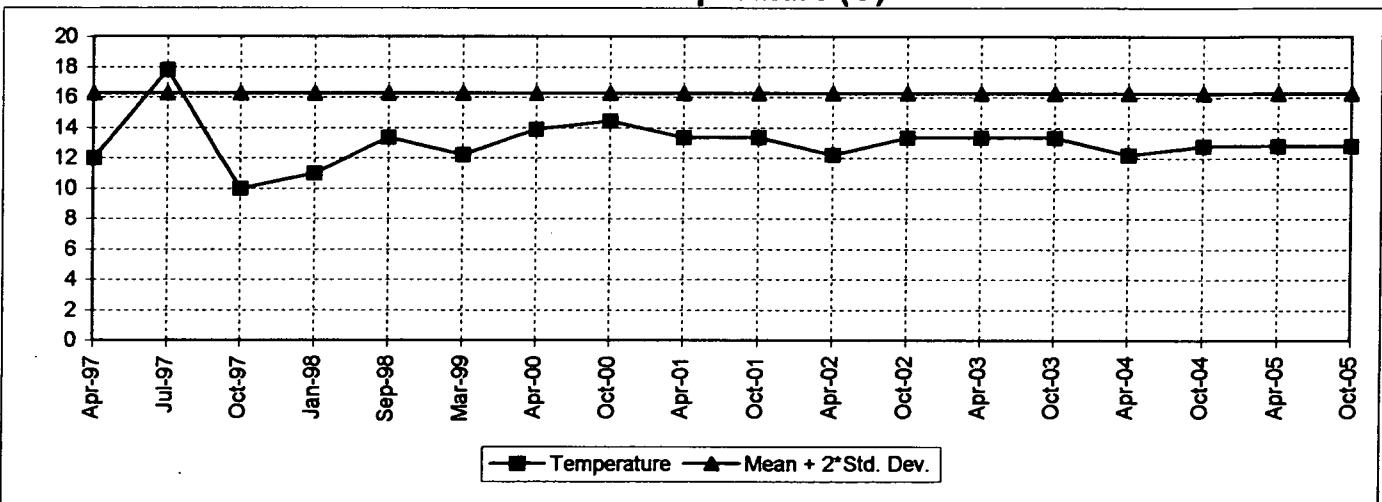
pH



MW-92-7

pH



MW-92-2**Temperature (C)****MW-92-5****Temperature (C)****MW-92-7****Temperature (C)**

SURFACE WATER SAMPLING RESULTS - 1997 to 2005**Arsenic, Dissolved (mg/L)**

Date	SW-1
Apr-97	0.0013
Jul-97	0.002
Oct-97	0.0029
Jan-98	0.003
Mar-99	<0.001

Upgradient Mean + 2(Standard Deviation) = **0.0039** Action Level = **0.001 dNRL****Barium, Dissolved (mg/l)**

Date	SW-1
Apr-97	0.11
Jul-97	0.05
Oct-97	0.099
Jan-98	0.076
Mar-99	0.048

Upgradient Mean + 2(Standard Deviation) = **0.1327** Action Level = **2 fHAL****Magnesium, Dissolved (mg/l)**

Date	SW-1
Apr-97	0.68
Jul-97	4
Oct-97	0.25
Jan-98	0.3
Mar-99	2.06

Upgradient Mean + 2(Standard Deviation) = **4.6564** Action Level = **None****Zinc, Dissolved (mg/l)**

Date	SW-1
Apr-97	<0.03
Jul-97	0.031
Oct-97	0.033
Jan-98	<0.03
Mar-99	<0.03

Upgradient Mean + 2(Standard Deviation) = **0.0334** Action Level = **2 fHAL**

Chloride (mg/l)

Date	SW-1
Apr-97	54
Jul-97	52
Oct-97	51
Jan-98	56
Sep-98	47.5
Mar-99	51
Apr-00	46
Oct-00	41
Apr-01	46
Oct-01	48
Apr-02	44
Oct-02	45
Apr-03	51
Oct-03	47
Apr-04	49
Oct-04	49
Apr-05	61
Oct-05	64

Upgradient Mean + 2(Standard Deviation) = **61.73** Action Level = **250 fSMCL**

Nitrogen, Ammonia (mg/l)

Date	SW-1
Apr-97	<1
Jul-97	<1
Oct-97	<1
Jan-98	<1
Sep-98	<1
Mar-99	<1
Apr-00	<1
Oct-00	<1
Apr-01	<1
Oct-01	<1
Apr-02	<1
Oct-02	<1
Apr-03	<1
Oct-03	<1
Apr-04	<1
Oct-04	<1
Apr-05	<1
Oct-05	<1

Upgradient Mean + 2(Standard Deviation) = **1.0000** Action Level = **30 f action level**

Iron, Dissolved (mg/l)

Date	SW-1
Apr-97	0.033
Jul-97	0.035
Oct-97	<0.03
Jan-98	<0.035
Sep-98	<0.03
Mar-99	0.052
Apr-00	<0.03
Oct-00	<0.03
Apr-01	0.082
Oct-01	<0.03
Apr-02	<0.03
Oct-02	0.032
Apr-03	<0.030
Oct-03	<0.030
Apr-04	<0.03
Oct-04	<0.03
Apr-05	0.104
Oct-05	0.085

Upgradient Mean + 2(Standard Deviation) = **0.088** Action Level = **0.3 f action level**

Chemical Oxygen Demand (mg/l)

Date	SW-1
Apr-97	27
Jul-97	21
Oct-97	11
Jan-98	27
Sep-98	<10
Mar-99	10.5
Apr-00	<10
Oct-00	18
Apr-01	13
Oct-01	<10
Apr-02	11
Oct-02	23
Apr-03	29
Oct-03	15
Apr-04	26
Oct-04	<10
Apr-05	<10
Oct-05	16

Upgradient Mean + 2(Standard Deviation) = **30.71** Action Level = **None**

Conductance (mS)

Date	SW-1
Apr-97	0.54
Jul-97	0.58
Oct-97	0.63
Jan-98	0.54
Sep-98	0.50
Mar-99	0.54
Apr-00	0.53
Oct-00	0.49
Apr-01	0.51
Oct-01	0.57
Apr-02	0.48
Oct-02	0.81
Apr-03	0.93
Oct-03	0.86
Apr-04	0.88
Oct-04	1.25
Apr-05	1.23
Oct-05	0.64

Upgradient Mean + 2(Standard Deviation) = **1.19** Action Level = None

pH

Date	SW-1
Apr-97	11.4
Jul-97	10.1
Oct-97	11.2
Jan-98	11.8
Sep-98	9.5
Mar-99	9.8
Apr-00	9.8
Oct-00	6.2
Apr-01	8.7
Oct-01	8.3
Apr-02	11.3
Oct-02	11.22
Apr-03	11.34
Oct-03	10.65
Apr-04	10.29
Oct-04	9.42
Apr-05	9.16
Oct-05	9.77

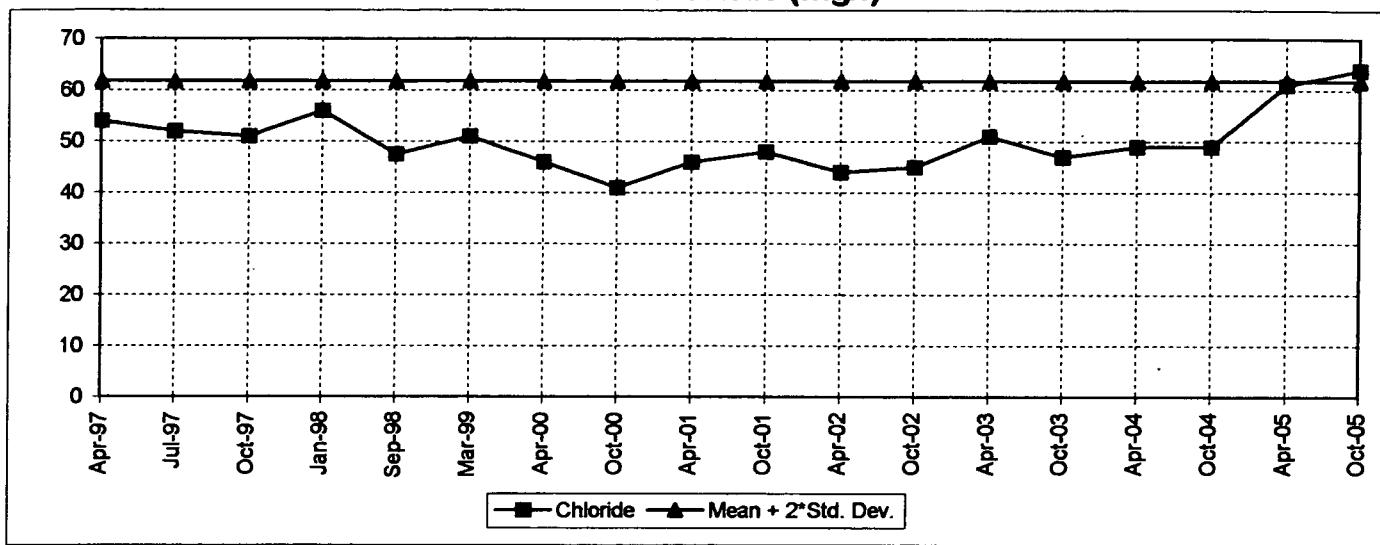
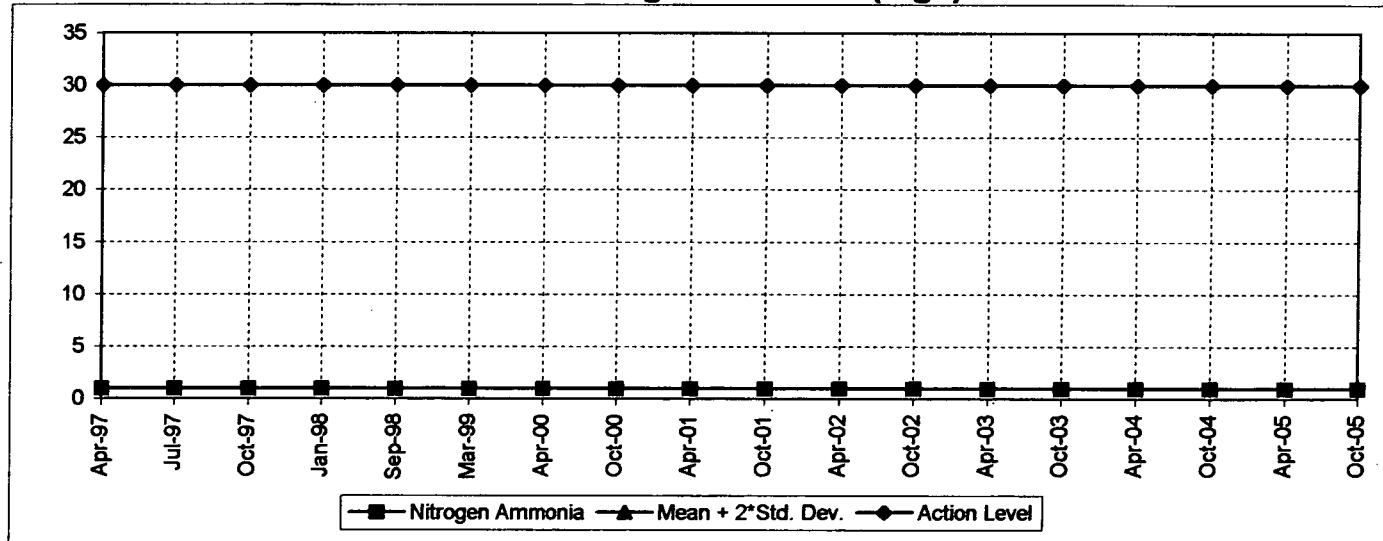
Upgradient Mean + 2(Standard Deviation) = **12.77** Upper Action Level = 8.5 fSMCL
 Upgradient Mean - 2(Standard Deviation) = **7.22** Lower Action Level = 6.5 fSMCL

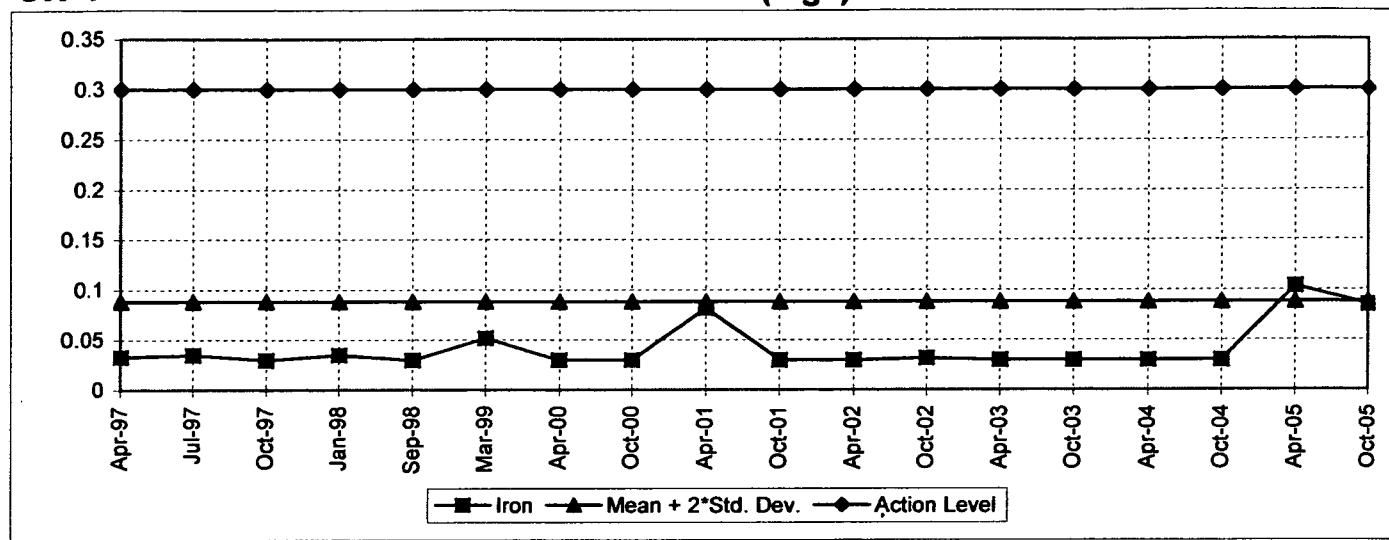
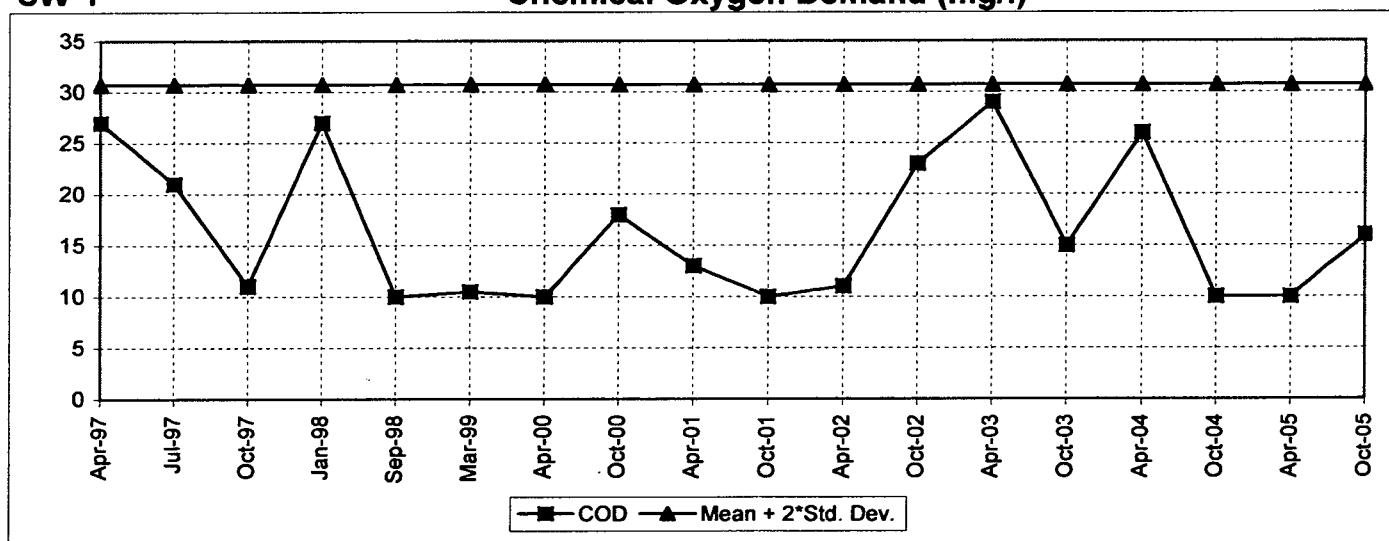
Temperature (C)

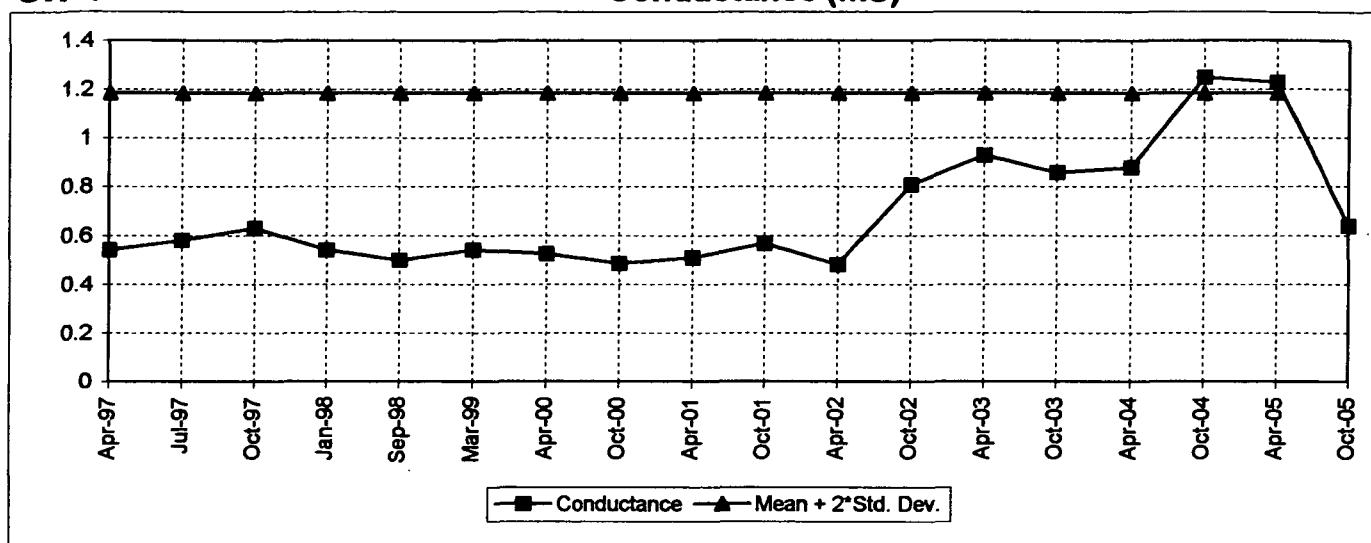
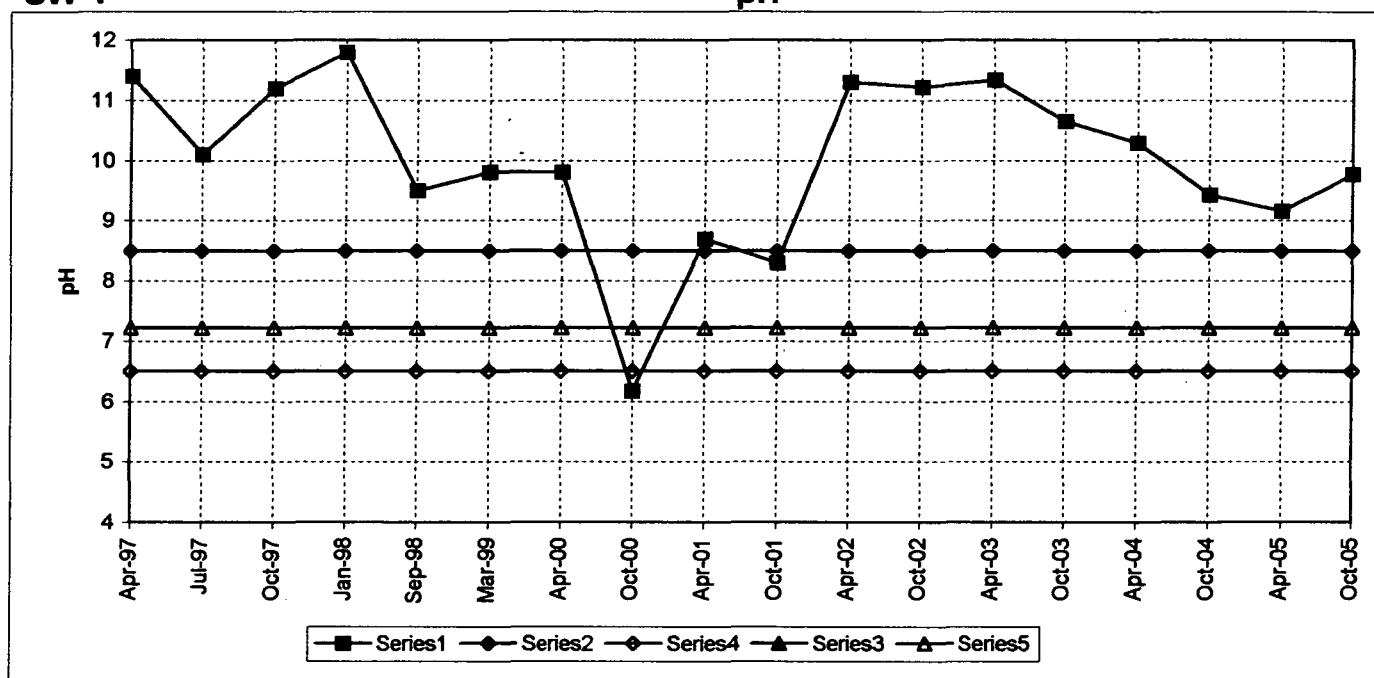
Date	SW-1
Apr-97	12.00
Jul-97	26.70
Oct-97	14.00
Jan-98	0.00
Sep-98	24.40
Mar-99	8.33
Apr-00	18.88
Oct-00	17.77
Apr-01	17.77
Oct-01	12.78
Apr-02	14.44
Oct-02	13.88
Apr-03	14.44
Oct-03	12.77
Apr-04	15.56
Oct-04	16.11
Apr-05	13.88
Oct-05	19.44

Upgradient Mean + 2(Standard Deviation) = **26.74**

Action Level = **None**

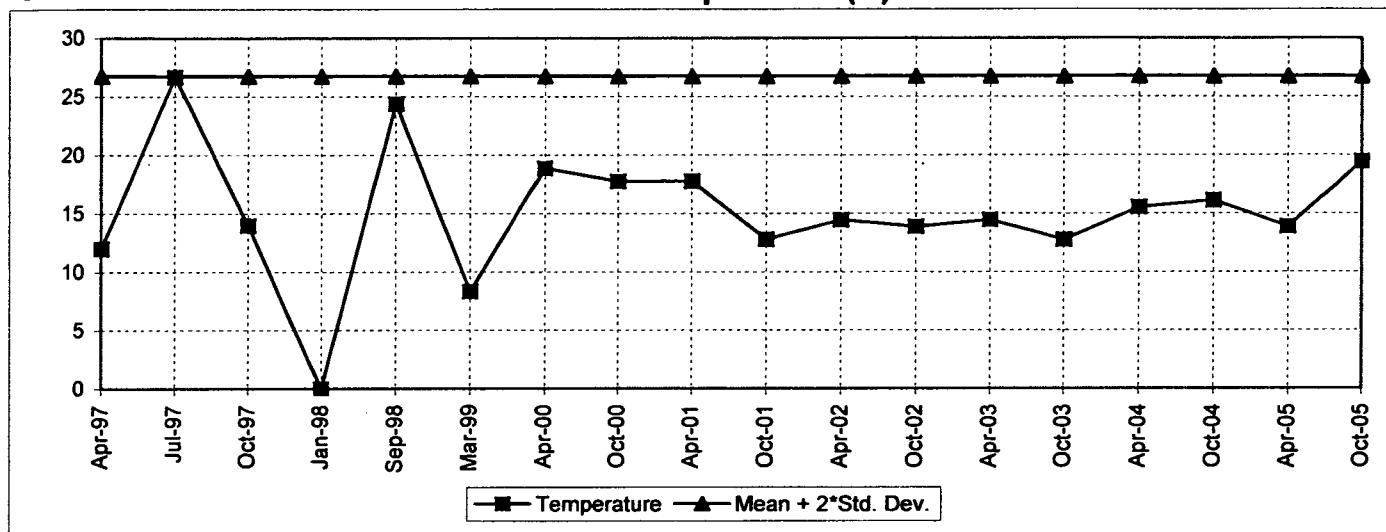
SW-1**Chloride (mg/l)****SW-1****Nitrogen Ammonia (mg/l)**

SW-1**Iron (mg/l)****SW-1****Chemical Oxygen Demand (mg/l)**

SW-1**Conductance (mS)****SW-1****pH**

SW-1

Temperature (C)



APPENDIX - 4
IDNR SAMPLING FORMS

**FORM FOR GROUNDWATER SAMPLING AND/OR
GROUNDWATER ELEVATION MEASUREMENT**

Site Name Concrete Supply Construction Rubble Site Permit No. 77-SDP-86P

Monitoring Well/Piezometer No. MW-92-1 Upgradient X
Downgradient _____

Name of person sampling Wayne Shannon

A. MONITORING WELL/PIEZOMETER CONDITIONS

Well/Piezometer Properly Capped? Yes Standing Water or Litter No
If no, explain _____ If yes, explain _____

B. GROUNDWATER ELEVATIONN MEASUREMENT (+/- 0.01 FOOT, MSL)

Elevation: Top of inner well casing 796.82 Ground Elevation 794.78
Depth of well 26.53' Inside Casing Diameter (in inches) 2
Equipment Used Slope Water Level Indicator, Model 51453

Groundwater Level (+/- 0.01 foot below top of inner casing, MSL):

	Date/Time	Depth to Groundwater	Groundwater Elevation
Before Purging	<u>4/28/05 @ 8:05</u>	<u>22.70</u>	<u>774.12</u>
After Purging	<u>4/28/05 @ 8:30</u>	<u>22.70</u>	_____
Before Sampling	<u>4/28/05 @ 8:40</u>	<u>22.70</u>	_____

***C. WELL PURGING**

Quantity of Water Removed from Well (gallons) 2
No. of Well Volumes (based on current water level) 3
Was the well pumped/bailed dry? No

Equipment used:

Bailer type Disposable Dedicated Bailer? Yes
Pump type _____ Dedicated Pump? _____
If not dedicated, method of cleaning _____

***D. FIELD MEASUREMENT**

Weather Conditions Cloudy 40s

Field Measurements (after stabilization):

Temperature	<u>53</u>	Units <u>°F</u>
Equipment used	<u>Glass Thermometer</u>	
pH	<u>6.84</u>	
Equipment used	<u>pH Tester II</u>	
Specific Conditions	<u>1111</u>	Units <u>µs/cm</u>
Equipment used	<u>Orion 124 (make & model)</u>	

Comments _____

NOTE: Attach Laboratory Report and 8-12" x 11" site plan showing locations of all surface and groundwater monitoring points. One map per sampling round.

*Omit if only measuring groundwater elevations

**FORM FOR GROUNDWATER SAMPLING AND/OR
GROUNDWATER ELEVATION MEASUREMENT**

Site Name Concrete Supply Construction Rubble Site Permit No. 77-SDP-86P

Monitoring Well/Piezometer No. MW-92-1R Upgradient X
Downgradient _____

Name of person sampling Wayne Shanon

A. MONITORING WELL/PIEZOMETER CONDITIONS

Well/Piezometer Properly Capped? Yes Standing Water or Litter No
If no, explain _____ If yes, explain _____

B. GROUNDWATER ELEVATIONN MEASUREMENT (+/- 0.01 FOOT, MSL)

Elevation : Top of inner well casing 789.92 Ground Elevation 789.64
Depth of well 24.08' Inside Casing Diameter (in inches) 2
Equipment Used Slope Water Level Indicator, Model 51453

Groundwater Level (+/- 0.01 foot below top of inner casing, MSL):

	Date/Time	Depth to Groundwater	Groundwater Elevation
Before Purging	<u>4/28/05 @ 10:30</u>	<u>16.30</u>	<u>773.62</u>
After Purging	<u>4/28/05 @ 10:50</u>	<u>16.30</u>	_____
Before Sampling	<u>4/28/05 @ 11:00</u>	<u>16.30</u>	_____

***C. WELL PURGING**

Quantity of Water Removed from Well (gallons) 4
No. of Well Volumes (based on current water level) 3
Was the well pumped/bailed dry? No

Equipment used:

Bailer type Disposable Dedicated Bailer? Yes
Pump type _____ Dedicated Pump? _____
If not dedicated, method of cleaning _____

***D. FIELD MEASUREMENT**

Weather Conditions Cloudy 40s

Field Measurements (after stabilization):

Temperature 55 Units °F

Equipment used Glass Thermometer

pH 6.70

Equipment used pH Tester II

Specific Conditions 1728 Units µs/cm

Equipment used Orion 124 (make & model)

Comments _____

NOTE: Attach Laboratory Report and 8-12" x 11" site plan showing locations of all surface and groundwater monitoring points. One map per sampling round.

*Omit if only measuring groundwater elevations

**FORM FOR GROUNDWATER SAMPLING AND/OR
GROUNDWATER ELEVATION MEASUREMENT**

Site Name Concrete Supply Construction Rubble Site Permit No. 77-SDP-86P

Monitoring Well/Piezometer No. MW-92-2 Upgradient X
Downgradient _____

Name of person sampling Wayne Shannon

A. MONITORING WELL/PIEZOMETER CONDITIONS

Well/Piezometer Properly Capped? Yes Standing Water or Litter No
If no, explain _____ If yes, explain _____

B. GROUNDWATER ELEVATIONN MEASUREMENT (+/- 0.01 FOOT, MSL)

Elevation : Top of inner well casing 797.47 Ground Elevation 794.78
Depth of well 62.57' Inside Casing Diameter (in inches) 2
Equipment Used Slope Water Level Indicator, Model 51453

Groundwater Level (+/- 0.01 foot below top of inner casing, MSL):

	Date/Time	Depth to Groundwater	Groundwater Elevation
Before Purging	<u>4/28/05 @ 8:45</u>	<u>23.37</u>	<u>774.10</u>
After Purging	<u>4/28/05 @ 9:35</u>	<u>23.37</u>	_____
Before Sampling	<u>4/28/05 @ 9:45</u>	<u>23.37</u>	_____

***C. WELL PURGING**

Quantity of Water Removed from Well (gallons) 19
No. of Well Volumes (based on current water level) 3
Was the well pumped/bailed dry? No

Equipment used:

Bailer type	<u>Disposable</u>	Dedicated Bailer?	<u>Yes</u>
Pump type	_____	Dedicated Pump?	_____
If not dedicated, method of cleaning _____			

***D. FIELD MEASUREMENT**

Weather Conditions Cloudy 40s

Field Measurements (after stabilization):

Temperature	<u>53</u>	Units <u>°F</u>
Equipment used	<u>Glass Thermometer</u>	
pH	<u>6.38</u>	_____
Equipment used	<u>pH Tester II</u>	
Specific Conditions	<u>1153</u>	Units <u>µs/cm</u>
Equipment used	<u>Orion 124 (make & model)</u>	

Comments _____

NOTE: Attach Laboratory Report and 8-12" x 11" site plan showing locations of all surface and groundwater monitoring points. One map per sampling round.

*Omit if only measuring groundwater elevations

**FORM FOR GROUNDWATER SAMPLING AND/OR
GROUNDWATER ELEVATION MEASUREMENT**

Site Name Concrete Supply Construction Rubble Site Permit No. 77-SDP-86P

Monitoring Well/Piezometer No. MW-92-3 Upgradient _____
Downgradient _____

Name of person sampling Wayne Shannon

A. MONITORING WELL/PIEZOMETER CONDITIONS

Well/Piezometer Properly Capped? Yes Standing Water or Litter No
If no, explain _____ If yes, explain _____

B. GROUNDWATER ELEVATIONN MEASUREMENT (+/- 0.01 FOOT, MSL)

Elevation : Top of inner well casing 797.70 Ground Elevation 797.12
Depth of well 25.61' Inside Casing Diameter (in inches) 2
Equipment Used Slope Water Level Indicator, Model 51453

Groundwater Level (+/- 0.01 foot below top of inner casing, MSL):

	Date/Time	Depth to Groundwater	Groundwater Elevation
Before Purging	<u>4/28/05 @ 11:20</u>	<u>25.35</u>	<u>772.35</u>
After Purging	_____	<u>NA</u>	_____
Before Sampling	_____	<u>NA</u>	_____

***C. WELL PURGING**

Quantity of Water Removed from Well (gallons) _____ NA (Not enough water, not sampled)
No. of Well Volumes (based on current water level) _____
Was the well pumped/bailed dry? No

Equipment used:

Bailer type Disposable Dedicated Bailer? Yes
Pump type _____ Dedicated Pump? _____
If not dedicated, method of cleaning _____

***D. FIELD MEASUREMENT**

Weather Conditions Cloudy 50s

Field Measurements (after stabilization):

Temperature _____ Units °F

Equipment used Glass Thermometer

pH _____

Equipment used pH Tester II

Specific Conditions _____ Units µs/cm

Equipment used Orion 124 (make & model)

Comments Not enough water, not sampled.

NOTE: Attach Laboratory Report and 8-12" x 11" site plan showing locations of all surface and groundwater monitoring points. One map per sampling round.

*Omit if only measuring groundwater elevations

**FORM FOR GROUNDWATER SAMPLING AND/OR
GROUNDWATER ELEVATION MEASUREMENT**

Site Name Concrete Supply Construction Rubble Site Permit No. 77-SDP-86P

Monitoring Well/Piezometer No. MW-92-4 Upgradient _____
Downgradient X

Name of person sampling Wayne Shanon

A. MONITORING WELL/PIEZOMETER CONDITIONS

Well/Piezometer Properly Capped? Yes Standing Water or Litter No
If no, explain _____ If yes, explain _____

B. GROUNDWATER ELEVATIONN MEASUREMENT (+/- 0.01 FOOT, MSL)

Elevation : Top of inner well casing 799.27 Ground Elevation 798.69
Depth of well 29.65' Inside Casing Diameter (in inches) 2
Equipment Used Slope Water Level Indicator, Model 51453

Groundwater Level (+/- 0.01 foot below top of inner casing, MSL):

	Date/Time	Depth to Groundwater	Groundwater Elevation
Before Purging	<u>4/28/05 @ 14:35</u>	<u>27.31</u>	<u>771.96</u>
After Purging	<u>4/28/05 @ 15:40</u>	<u>27.31</u>	_____
Before Sampling	<u>4/28/05 @ 15:55</u>	<u>27.31</u>	_____

***C. WELL PURGING**

Quantity of Water Removed from Well (gallons) 2
No. of Well Volumes (based on current water level) 3
Was the well pumped/bailed dry? No

Equipment used:

Bailer type Disposable Dedicated Bailer? Yes
Pump type _____ Dedicated Pump? _____
If not dedicated, method of cleaning _____

***D. FIELD MEASUREMENT**

Weather Conditions Cloudy 50s
Field Measurements (after stabilization):

Temperature	<u>55</u>	Units <u>°F</u>
Equipment used	<u>Glass Thermometer</u>	
pH	<u>7.21</u>	
Equipment used	<u>pH Tester II</u>	
Specific Conditions	<u>632</u>	Units <u>µs/cm</u>
Equipment used	<u>Orion 124 (make & model)</u>	

Comments _____

NOTE: Attach Laboratory Report and 8-12" x 11" site plan showing locations of all surface and groundwater monitoring points. One map per sampling round.

*Omit if only measuring groundwater elevations

**FORM FOR GROUNDWATER SAMPLING AND/OR
GROUNDWATER ELEVATION MEASUREMENT**

Site Name Concrete Supply Construction Rubble Site Permit No. 77-SDP-86P

Monitoring Well/Piezometer No. MW-92-5 Upgradient _____
Downdrain X

Name of person sampling Wayne Shanon

A. MONITORING WELL/PIEZOMETER CONDITIONS

Well/Piezometer Properly Capped? Yes Standing Water or Litter No
If no, explain _____ If yes, explain _____

B. GROUNDWATER ELEVATIONN MEASUREMENT (+/- 0.01 FOOT, MSL)

Elevation : Top of inner well casing 799.52 Ground Elevation 798.69
Depth of well 68.12' Inside Casing Diameter (in inches) 2
Equipment Used Slope Water Level Indicator, Model 51453

Groundwater Level (+/- 0.01 foot below top of inner casing, MSL):

	Date/Time	Depth to Groundwater	Groundwater Elevation
Before Purging	<u>4/28/05 @ 14:35</u>	<u>27.36</u>	<u>772.16</u>
After Purging	<u>4/28/05 @ 15:20</u>	<u>27.36</u>	
Before Sampling	<u>4/28/05 @ 15:25</u>	<u>27.36</u>	

***C. WELL PURGING**

Quantity of Water Removed from Well (gallons) 20
No. of Well Volumes (based on current water level) 3
Was the well pumped/bailed dry? No

Equipment used:

Bailer type Disposable Dedicated Bailer? Yes
Pump type _____ Dedicated Pump? _____
If not dedicated, method of cleaning _____

***D. FIELD MEASUREMENT**

Weather Conditions Cloudy 50s

Field Measurements (after stabilization):

Temperature	<u>55</u>	Units <u>°F</u>
Equipment used	<u>Glass Thermometer</u>	
pH	<u>6.34</u>	
Equipment used	<u>pH Tester II</u>	
Specific Conditions	<u>1214</u>	Units <u>µs/cm</u>
Equipment used	<u>Orion 124 (make & model)</u>	

Comments _____

NOTE: Attach Laboratory Report and 8-12" x 11" site plan showing locations of all surface and groundwater monitoring points. One map per sampling round.

*Omit if only measuring groundwater elevations

**FORM FOR GROUNDWATER SAMPLING AND/OR
GROUNDWATER ELEVATION MEASUREMENT**

Site Name Concrete Supply Construction Rubble Site Permit No. 77-SDP-86P

Monitoring Well/Piezometer No. MW-92-6 Upgradient _____
Downdrain X

Name of person sampling Wayne Shanon

A. MONITORING WELL/PIEZOMETER CONDITIONS

Well/Piezometer Properly Capped? Yes Standing Water or Litter No
If no, explain _____ If yes, explain _____

B. GROUNDWATER ELEVATIONN MEASUREMENT (+/- 0.01 FOOT, MSL)

Elevation : Top of inner well casing 801.38 Ground Elevation 799.01
Depth of well 33.42' Inside Casing Diameter (in inches) 2
Equipment Used Slope Water Level Indicator, Model 51453

Groundwater Level (+/- 0.01 foot below top of inner casing, MSL):

	Date/Time	Depth to Groundwater	Groundwater Elevation
Before Purging	<u>4/28/05 @ 12:30</u>	<u>29.15</u>	<u>772.23</u>
After Purging	<u>4/28/05 @ 14:05</u>	<u>29.15</u>	<u> </u>
Before Sampling	<u>4/28/05 @ 14:05</u>	<u>29.15</u>	<u> </u>

***C. WELL PURGING**

Quantity of Water Removed from Well (gallons) 2
No. of Well Volumes (based on current water level) 3
Was the well pumped/bailed dry? No

Equipment used:

Bailer type Disposable Dedicated Bailer? Yes
Pump type _____ Dedicated Pump? _____
If not dedicated, method of cleaning _____

***D. FIELD MEASUREMENT**

Weather Conditions Cloudy 50s

Field Measurements (after stabilization):

Temperature	<u>55</u>	Units <u>°F</u>
Equipment used	<u>Glass Thermometer</u>	
pH	<u>6.53</u>	
Equipment used	<u>pH Tester II</u>	
Specific Conditions	<u>1272</u>	Units <u>µs/cm</u>
Equipment used	<u>Orion 124 (make & model)</u>	

Comments _____

NOTE: Attach Laboratory Report and 8-12" x 11" site plan showing locations of all surface and groundwater monitoring points. One map per sampling round.

*Omit if only measuring groundwater elevations

**FORM FOR GROUNDWATER SAMPLING AND/OR
GROUNDWATER ELEVATION MEASUREMENT**

Site Name Concrete Supply Construction Rubble Site Permit No. 77-SDP-86P

Monitoring Well/Piezometer No. MW-92-7 Upgradient _____
Downgradient X

Name of person sampling Wayne Shanon

A. MONITORING WELL/PIEZOMETER CONDITIONS

Well/Piezometer Properly Capped? Yes Standing Water or Litter No
If no, explain _____ If yes, explain _____

B. GROUNDWATER ELEVATIONN MEASUREMENT (+/- 0.01 FOOT, MSL)

Elevation : Top of inner well casing 801.50 Ground Elevation 799.01
Depth of well 69.48' Inside Casing Diameter (in inches) 2
Equipment Used Slope Water Level Indicator, Model 51453

Groundwater Level (+/- 0.01 foot below top of inner casing, MSL):

	Date/Time	Depth to Groundwater	Groundwater Elevation
Before Purging	<u>4/28/05 @ 12:35</u>	<u>29.28</u>	<u>722.22</u>
After Purging	<u>4/28/05 @ 13:20</u>	<u>29.28</u>	
Before Sampling	<u>4/28/05 @ 13:25</u>	<u>29.28</u>	

***C. WELL PURGING**

Quantity of Water Removed from Well (gallons) 20
No. of Well Volumes (based on current water level) 3
Was the well pumped/bailed dry? No

Equipment used:

Bailer type <u>Disposable</u>	Dedicated Bailer? <u>Yes</u>
Pump type _____	Dedicated Pump? _____
If not dedicated, method of cleaning _____	

***D. FIELD MEASUREMENT**

Weather Conditions Cloudy 50s

Field Measurements (after stabilization):

Temperature <u>55</u>	Units <u>°F</u>
Equipment used <u>Glass Thermometer</u>	
pH <u>6.49</u>	
Equipment used <u>pH Tester II</u>	
Specific Conditions <u>1156</u>	Units <u>µs/cm</u>
Equipment used <u>Orion 124 (make & model)</u>	

Comments _____

NOTE: Attach Laboratory Report and 8-12" x 11" site plan showing locations of all surface and groundwater monitoring points. One map per sampling round.

*Omit if only measuring groundwater elevations

**FORM FOR
SURFACE WATER SAMPLING**

Site Name Concrete Supply Construction Rubble Site Permit No. 77-SDP-86P
 Surface Monitoring point No. SW-1 Date/Time 4/28/05 @ 10:20
 Name of Person Sampling Wayne Shannon

A. TYPE OF MONITORING POINT

Stream	<u> </u>	Open Tile	<u> </u>
Road Ditch	<u> </u>	Tile with Riser	<u> </u>
Drainage Ditch	<u> </u>	Other	<u>Pond</u>

B. PURPOSE OF MONITORING POINT

Upstream	<u> </u>	Downstream	<u> </u>
Within Landfill	<u>X</u>	Other	<u> </u>

C. MOINITORING POINT CONDITIONS

General description/condition of monitoring point _____

Was monitoring point dry? No Too little water to sample? No
 Was water flowing? No If yes, estimate quantity _____
 If yes, estimate depth _____

Was water discolored? No If yes, describe below.
 Does water have odor? No If yes, describe below.
 Was ground discolored? No If yes, describe below.
 Litter present? No If yes, describe below.

Comments _____

D. FIELD MEASUREMENTS

Weather Conditions Cloudy 40's

Field Measurements (after stabilization):

Temperature 57 Units °F

Equipment used Glass Thermometer

pH 9.16

Equipment used pH Tester II

Specific Conditions 1226 Units µs/cm

Equipment used Orion (make) 124 (model)

Comments _____

NOTE: Attach Laboratory Report and 8-12" x 11" site plan showing locations of all surface and groundwater monitoring points. One map per sampling round.

*Omit if only measuring groundwater elevations

**FORM FOR GROUNDWATER SAMPLING AND/OR
GROUNDWATER ELEVATION MEASUREMENT**

Site Name Concrete Supply Construction Rubble Site Permit No. 77-SDP-86P

Monitoring Well/Piezometer No. MW-92-1 Upgradient _____ X
Downgradient _____

Name of person sampling Wayne Shanon

A. MONITORING WELL/PIEZOMETER CONDITIONS

Well/Piezometer Properly Capped? Yes Standing Water or Litter No
If no, explain _____ If yes, explain _____

B. GROUNDWATER ELEVATIONN MEASUREMENT (+/- 0.01 FOOT, MSL)

Elevation: Top of inner well casing 796.82 Ground Elevation 794.78
Depth of well 26.53' Inside Casing Diameter (in inches) 2
Equipment Used Slope Water Level Indicator, Model 51453

Groundwater Level (+/- 0.01 foot below top of inner casing, MSL):

	Date/Time	Depth to Groundwater	Groundwater Elevation
Before Purging	<u>10/27/05 @ 16:00</u>	<u>20.44</u>	<u>776.38</u>
After Purging	<u>10/27/05 @ 17:20</u>	<u>20.44</u>	_____
Before Sampling	<u>10/27/05 @ 17:25</u>	<u>20.44</u>	_____

***C. WELL PURGING**

Quantity of Water Removed from Well (gallons) 3.25
No. of Well Volumes (based on current water level) 3
Was the well pumped/bailed dry? No

Equipment used:

Bailer type Disposable Dedicated Bailer? Yes
Pump type _____ Dedicated Pump? _____
If not dedicated, method of cleaning _____

***D. FIELD MEASUREMENT**

Weather Conditions Sunny 60s

Field Measurements (after stabilization):

Temperature	<u>57</u>	Units <u>°F</u>
Equipment used	<u>Glass Thermometer</u>	
pH	<u>5.96</u>	
Equipment used	<u>pH Tester II</u>	
Specific Conditions	<u>1012</u>	Units <u>µs/cm</u>
Equipment used	<u>Orion 124 (make & model)</u>	

Comments _____

NOTE: Attach Laboratory Report and 8-12" x 11" site plan showing locations of all surface and groundwater monitoring points. One map per sampling round.

*Omit if only measuring groundwater elevations

**FORM FOR GROUNDWATER SAMPLING AND/OR
GROUNDWATER ELEVATION MEASUREMENT**

Site Name Concrete Supply Construction Rubble Site Permit No. 77-SDP-86P

Monitoring Well/Piezometer No. MW-92-1R Upgradient X
Downgradient _____

Name of person sampling Wayne Shannon

A. MONITORING WELL/PIEZOMETER CONDITIONS

Well/Piezometer Properly Capped? Yes Standing Water or Litter No
If no, explain _____

B. GROUNDWATER ELEVATIONN MEASUREMENT (+/- 0.01 FOOT, MSL)

Elevation : Top of inner well casing 789.92 Ground Elevation 789.64
Depth of well 24.08' Inside Casing Diameter (in inches) 2
Equipment Used Slope Water Level Indicator, Model 51453

Groundwater Level (+/- 0.01 foot below top of inner casing, MSL):

	Date/Time	Depth to Groundwater	Groundwater Elevation
Before Purging	<u>10/27/05 @ 14:50</u>	<u>13.85</u>	<u>776.07</u>
After Purging	<u>10/27/05 @ 15:20</u>	<u>13.85</u>	_____
Before Sampling	<u>10/27/05 @ 15:25</u>	<u>13.85</u>	_____

***C. WELL PURGING**

Quantity of Water Removed from Well (gallons) 5.25
No. of Well Volumes (based on current water level) 3
Was the well pumped/bailed dry? No

Equipment used:

Bailer type Disposable Dedicated Bailer? Yes
Pump type _____ Dedicated Pump? _____
If not dedicated, method of cleaning _____

***D. FIELD MEASUREMENT**

Weather Conditions Sunny 60s

Field Measurements (after stabilization):

Temperature 56 Units °F

Equipment used Glass Thermometer

pH 6.27

Equipment used pH Tester II

Specific Conditions 1892 Units µs/cm

Equipment used Orion 124 (make & model)

Comments _____

NOTE: Attach Laboratory Report and 8-12" x 11" site plan showing locations of all surface and groundwater monitoring points. One map per sampling round.

*Omit if only measuring groundwater elevations

**FORM FOR GROUNDWATER SAMPLING AND/OR
GROUNDWATER ELEVATION MEASUREMENT**

Site Name Concrete Supply Construction Rubble Site Permit No. 77-SDP-86P

Monitoring Well/Piezometer No. MW-92-2 Upgradient X
Downgradient _____

Name of person sampling Wayne Shannon

A. MONITORING WELL/PIEZOMETER CONDITIONS

Well/Piezometer Properly Capped? Yes Standing Water or Litter No
If no, explain _____

B. GROUNDWATER ELEVATIONN MEASUREMENT (+/- 0.01 FOOT, MSL)

Elevation : Top of inner well casing 797.47 Ground Elevation 794.78
Depth of well 62.57' Inside Casing Diameter (in inches) 2
Equipment Used Slope Water Level Indicator, Model 51453

Groundwater Level (+/- 0.01 foot below top of inner casing, MSL):

	Date/Time	Depth to Groundwater	Groundwater Elevation
Before Purging	<u>10/27/05 @ 16:05</u>	<u>21.48</u>	<u>775.99</u>
After Purging	<u>10/27/05 @ 16:50</u>	<u>21.48</u>	
Before Sampling	<u>10/27/05 @ 16:55</u>	<u>21.48</u>	

***C. WELL PURGING**

Quantity of Water Removed from Well (gallons) 21
No. of Well Volumes (based on current water level) 3
Was the well pumped/bailed dry? No

Equipment used:

Bailer type Disposable Dedicated Bailer? Yes
Pump type _____ Dedicated Pump? _____
If not dedicated, method of cleaning _____

***D. FIELD MEASUREMENT**

Weather Conditions Sunny 60s
Field Measurements (after stabilization):

Temperature	<u>55</u>	Units <u>°F</u>
Equipment used	<u>Glass Thermometer</u>	
pH	<u>6.33</u>	
Equipment used	<u>pH Tester II</u>	
Specific Conditions	<u>1108</u>	Units <u>µs/cm</u>
Equipment used	<u>Orion 124 (make & model)</u>	

Comments _____

NOTE: Attach Laboratory Report and 8-12" x 11" site plan showing locations of all surface and groundwater monitoring points. One map per sampling round.

*Omit if only measuring groundwater elevations

**FORM FOR GROUNDWATER SAMPLING AND/OR
GROUNDWATER ELEVATION MEASUREMENT**

Site Name Concrete Supply Construction Rubble Site Permit No. 77-SDP-86P

Monitoring Well/Piezometer No. MW-92-3 Upgradient _____
Downdgradient _____

Name of person sampling Wayne Shannon

A. MONITORING WELL/PIEZOMETER CONDITIONS

Well/Piezometer Properly Capped? Yes Standing Water or Litter No
If no, explain _____

B. GROUNDWATER ELEVATIONN MEASUREMENT (+/- 0.01 FOOT, MSL)

Elevation : Top of inner well casing 797.70 Ground Elevation 797.12
Depth of well 25.61' Inside Casing Diameter (in inches) 2
Equipment Used Slope Water Level Indicator, Model 51453

Groundwater Level (+/- 0.01 foot below top of inner casing, MSL):

	Date/Time	Depth to Groundwater	Groundwater Elevation
Before Purging	<u>10/27/05 @ 14:00</u>	<u>22.38</u>	<u>775.32</u>
After Purging	<u>10/27/05 @ 14:15</u>	<u>22.38</u>	<u>_____</u>
Before Sampling	<u>10/27/05 @ 14:20</u>	<u>22.38</u>	<u>_____</u>

***C. WELL PURGING**

Quantity of Water Removed from Well (gallons) 1.75
No. of Well Volumes (based on current water level) 3
Was the well pumped/bailed dry? No

Equipment used:

Bailer type Disposable Dedicated Bailer? Yes
Pump type _____ Dedicated Pump? _____
If not dedicated, method of cleaning _____

***D. FIELD MEASUREMENT**

Weather Conditions Sunny 50s

Field Measurements (after stabilization):

Temperature 50 Units °F

Equipment used Glass Thermometer

pH 7.00

Equipment used pH Tester II

Specific Conditions 1244 Units µs/cm

Equipment used Orion 124 (make & model)

Comments _____

NOTE: Attach Laboratory Report and 8-12" x 11" site plan showing locations of all surface and groundwater monitoring points. One map per sampling round.

*Omit if only measuring groundwater elevations

**FORM FOR GROUNDWATER SAMPLING AND/OR
GROUNDWATER ELEVATION MEASUREMENT**

Site Name Concrete Supply Construction Rubble Site Permit No. 77-SDP-86P

Monitoring Well/Piezometer No. MW-92-4 Upgradient _____
Downgradient X

Name of person sampling Wayne Shannon

A. MONITORING WELL/PIEZOMETER CONDITIONS

Well/Piezometer Properly Capped? Yes Standing Water or Litter No
If no, explain _____ If yes, explain _____

B. GROUNDWATER ELEVATIONN MEASUREMENT (+/- 0.01 FOOT, MSL)

Elevation : Top of inner well casing 799.09 Ground Elevation 798.69
Depth of well 29.65' Inside Casing Diameter (in inches) 2
Equipment Used Slope Water Level Indicator, Model 51453

Groundwater Level (+/- 0.01 foot below top of inner casing, MSL):

	Date/Time	Depth to Groundwater	Groundwater Elevation
Before Purging	<u>10/27/05 @ 10:45</u>	<u>24.22</u>	<u>774.87</u>
After Purging	<u>10/27/05 @ 12:15</u>	<u>24.22</u>	_____
Before Sampling	<u>10/27/05 @ 12:20</u>	<u>24.22</u>	_____

***C. WELL PURGING**

Quantity of Water Removed from Well (gallons) 3
No. of Well Volumes (based on current water level) 3
Was the well pumped/bailed dry? No

Equipment used:

Bailer type Disposable Dedicated Bailer? Yes
Pump type _____ Dedicated Pump? _____
If not dedicated, method of cleaning _____

***D. FIELD MEASUREMENT**

Weather Conditions Sunny 40s

Field Measurements (after stabilization):

Temperature 55 Units °F

Equipment used Glass Thermometer

pH 6.87

Equipment used pH Tester II

Specific Conditions 1231 Units µs/cm

Equipment used Orion 124 (make & model)

Comments Lowered the casing (after sampling) elevation by 0.18' to fix cracked casing top

NOTE: Attach Laboratory Report and 8-12" x 11" site plan showing locations of all surface and groundwater monitoring points. One map per sampling round.

*Omit if only measuring groundwater elevations

**FORM FOR GROUNDWATER SAMPLING AND/OR
GROUNDWATER ELEVATION MEASUREMENT**

Site Name Concrete Supply Construction Rubble Site Permit No. 77-SDP-86P

Monitoring Well/Piezometer No. MW-92-5 Upgradient _____
Downgradient X

Name of person sampling Wayne Shannon

A. MONITORING WELL/PIEZOMETER CONDITIONS

Well/Piezometer Properly Capped? Yes Standing Water or Litter No
If no, explain _____

If yes, explain _____

B. GROUNDWATER ELEVATIONN MEASUREMENT (+/- 0.01 FOOT, MSL)

Elevation : Top of inner well casing 799.52 Ground Elevation 798.69
Depth of well 68.12' Inside Casing Diameter (in inches) 2
Equipment Used Slope Water Level Indicator, Model 51453

Groundwater Level (+/- 0.01 foot below top of inner casing, MSL):

	Date/Time	Depth to Groundwater	Groundwater Elevation
Before Purging	<u>10/27/05 @ 10:45</u>	<u>24.48</u>	
After Purging	<u>10/27/05 @ 11:35</u>	<u>24.48</u>	<u>775.04</u>
Before Sampling	<u>10/27/05 @ 11:45</u>	<u>24.48</u>	

***C. WELL PURGING**

Quantity of Water Removed from Well (gallons) 21.75
No. of Well Volumes (based on current water level) 3
Was the well pumped/bailed dry? No

Equipment used:

Bailer type Disposable Dedicated Bailer? Yes
Pump type _____ Dedicated Pump? _____
If not dedicated, method of cleaning _____

***D. FIELD MEASUREMENT**

Weather Conditions Sunny 40s

Field Measurements (after stabilization):

Temperature 55 Units °F

Equipment used Glass Thermometer

pH 6.25

Equipment used pH Tester II

Specific Conditions 1097 Units µs/cm

Equipment used Orion 124 (make & model)

Comments _____

NOTE: Attach Laboratory Report and 8-12" x 11" site plan showing locations of all surface and groundwater monitoring points. One map per sampling round.

*Omit if only measuring groundwater elevations

**FORM FOR GROUNDWATER SAMPLING AND/OR
GROUNDWATER ELEVATION MEASUREMENT**

Site Name Concrete Supply Construction Rubble Site Permit No. 77-SDP-86P

Monitoring Well/Piezometer No. MW-92-6 Upgradient _____
Downdgradient X

Name of person sampling Wayne Shannon

A. MONITORING WELL/PIEZOMETER CONDITIONS

Well/Piezometer Properly Capped? Yes Standing Water or Litter No
If no, explain _____ If yes, explain _____

B. GROUNDWATER ELEVATIONN MEASUREMENT (+/- 0.01 FOOT, MSL)

Elevation : Top of inner well casing 801.38 Ground Elevation 799.01
Depth of well 33.42' Inside Casing Diameter (in inches) 2
Equipment Used Slope Water Level Indicator, Model 51453

Groundwater Level (+/- 0.01 foot below top of inner casing, MSL):

	Date/Time	Depth to Groundwater	Groundwater Elevation
Before Purging	<u>10/27/05 @ 8:30</u>	<u>26.37</u>	<u>775.01</u>
After Purging	<u>10/27/05 @ 10:15</u>	<u>26.37</u>	<u> </u>
Before Sampling	<u>10/27/05 @ 10:20</u>	<u>26.37</u>	<u> </u>

***C. WELL PURGING**

Quantity of Water Removed from Well (gallons) 3.5
No. of Well Volumes (based on current water level) 3
Was the well pumped/bailed dry? No

Equipment used:

Bailer type Disposable Dedicated Bailer? Yes
Pump type _____ Dedicated Pump? _____
If not dedicated, method of cleaning _____

***D. FIELD MEASUREMENT**

Weather Conditions Sunny 30s

Field Measurements (after stabilization):

Temperature 55 Units °F

Equipment used Glass Thermometer

pH 6.53

Equipment used pH Tester II

Specific Conditions 1276 Units µs/cm

Equipment used Orion 124 (make & model)

Comments _____

NOTE: Attach Laboratory Report and 8-12" x 11" site plan showing locations of all surface and groundwater monitoring points. One map per sampling round.

*Omit if only measuring groundwater elevations

**FORM FOR GROUNDWATER SAMPLING AND/OR
GROUNDWATER ELEVATION MEASUREMENT**

Site Name Concrete Supply Construction Rubble Site Permit No. 77-SDP-86P

Monitoring Well/Piezometer No. MW-92-7 Upgradient _____
Downgradient

Name of person sampling Wayne Shanon

A. MONITORING WELL/PIEZOMETER CONDITIONS

Well/Piezometer Properly Capped? Yes Standing Water or Litter No
If no, explain _____ If yes, explain _____

B. GROUNDWATER ELEVATIONN MEASUREMENT (+/- 0.01 FOOT, MSL)

Elevation : Top of inner well casing 801.50 Ground Elevation 799.01
Depth of well 69.48' Inside Casing Diameter (in inches) 2
Equipment Used Slope Water Level Indicator, Model 51453

Groundwater Level (+/- 0.01 foot below top of inner casing, MSL):

	Date/Time	Depth to Groundwater	Groundwater Elevation
Before Purging	<u>10/27/05 @ 8:32</u>	<u>26.51</u>	<u>774.99</u>
After Purging	<u>10/27/05 @ 9:40</u>	<u>26.51</u>	
Before Sampling	<u>10/27/05 @ 9:45</u>	<u>26.51</u>	

***C. WELL PURGING**

Quantity of Water Removed from Well (gallons) 21.5
No. of Well Volumes (based on current water level) 3
Was the well pumped/bailed dry? No

Equipment used:

Bailer type Disposable Dedicated Bailer? Yes
Pump type _____ Dedicated Pump? _____
If not dedicated, method of cleaning _____

***D. FIELD MEASUREMENT**

Weather Conditions Sunny 30s

Field Measurements (after stabilization):

Temperature 55 Units °F

Equipment used Glass Thermometer

pH 6.22

Equipment used pH Tester II

Specific Conditions 1147 Units µs/cm

Equipment used Orion 124 (make & model)

Comments _____

NOTE: Attach Laboratory Report and 8-12" x 11" site plan showing locations of all surface and groundwater monitoring points. One map per sampling round.

*Omit if only measuring groundwater elevations

**FORM FOR
SURFACE WATER SAMPLING**

Site Name Concrete Supply Construction Rubble Site Permit No. 77-SDP-86P
 Surface Monitoring point No. SW-1 Date/Time 10/27/05 @ 15:45
 Name of Person Sampling Wayne Shannon

A. TYPE OF MONITORING POINT

Stream	<u> </u>	Open Tile	<u> </u>
Road Ditch	<u> </u>	Tile with Riser	<u> </u>
Drainage Ditch	<u> </u>	Other	<u>Pond</u>

B. PURPOSE OF MONITORING POINT

Upstream	<u> </u>	Downstream	<u> </u>
Within Landfill	<u>X</u>	Other	<u> </u>

C. MOINITORING POINT CONDITIONS

General description/condition of monitoring point _____

Was monitoring point dry? No Too little water to sample? No
 Was water flowing? No If yes, estimate quantity _____
 If yes, estimate depth _____

Was water discolored? No If yes, describe below.
 Does water have odor? No If yes, describe below.
 Was ground discolored? No If yes, describe below.
 Litter present? No If yes, describe below.

Comments _____

D. FIELD MEASUREMENTS

Weather Conditions Cloudy 40's

Field Measurements (after stabilization):

Temperature	<u>67</u>	Units	<u>°F</u>
Equipment used	<u>Glass Thermometer</u>		
pH	<u>9.77</u>		
Equipment used	<u>pH Tester II</u>		
Specific Conditions	<u>637</u>	Units	<u>µs/cm</u>
Equipment used	<u>Orion (make) 124 (model)</u>		

Comments _____

NOTE: Attach Laboratory Report and 8-12" x 11" site plan showing locations of all surface and groundwater monitoring points. One map per sampling round.

*Omit if only measuring groundwater elevations

APPENDIX - 5
LABORATORY REPORTS

Entered



Accreditations:
Iowa DNR: 095
New Jersey DEP: IA001
Kansas DHE: E-10287

ANALYTICAL REPORT

May 06, 2005

Work Order: 15D1321

Page 1 of 4

Report To
Chandra Shekar Shekar Engineering 8938 Highland Oaks Drive Johnston, IA 50131

Work Order Information
Date Received: 04/29/2005 5:25PM Collector: Wayne Shannon Phone: 515-334-5062 PO Number:

Project: Concrete Supply Landfill
Project Number: [none]

Analyte	Result	MRL	Method	Analyst	Analyzed	Qualifier
15D1321-01 SW-1			Matrix: Water		Collected: 04/28/05 10:20	
<i>Determination of Volatile Organic Compounds</i>						
Trichloroethylene	<0.3 ug/l	0.3	EPA 8260B	TVK	04/29/05 21:49	
Surrogate: Dibromofluoromethane	101 %		83-123	TVK	04/29/05 21:49	
Surrogate: 1,2-Dichloroethane-d4	96.9 %		79-128	TVK	04/29/05 21:49	
Surrogate: Toluene-d8	101 %		83-114	TVK	04/29/05 21:49	
Surrogate: 4-Bromofluorobenzene	98.7 %		81-114	TVK	04/29/05 21:49	
<i>Determination of Conventional Chemistry Parameters</i>						
Chloride	61 mg/l	10	EPA 9252	MAQ	04/29/05 16:18	
Chemical Oxygen Demand	<10 mg/l	10	EPA 410.4	MAQ	05/02/05 16:00	
Nitrogen, Ammonia	<1.0 mg/l	1.0	SM 4500-NH3 F	SAA	05/02/05 12:05	
<i>Determination of Dissolved Metals</i>						
Iron, dissolved	0.104 mg/l	0.030	EPA 6010B	SNT	04/29/05 14:39	
15D1321-02 MW-92-1			Matrix: Water		Collected: 04/28/05 08:40	
<i>Determination of Volatile Organic Compounds</i>						
Trichloroethylene	10.9 ug/l	0.3	EPA 8260B	TVK	04/29/05 22:27	
Surrogate: Dibromofluoromethane	99.6 %		83-123	TVK	04/29/05 22:27	
Surrogate: 1,2-Dichloroethane-d4	98.2 %		79-128	TVK	04/29/05 22:27	
Surrogate: Toluene-d8	102 %		83-114	TVK	04/29/05 22:27	
Surrogate: 4-Bromofluorobenzene	99.7 %		81-114	TVK	04/29/05 22:27	
<i>Determination of Conventional Chemistry Parameters</i>						
Chloride	60 mg/l	10	EPA 9252	MAQ	04/29/05 16:18	
Chemical Oxygen Demand	22 mg/l	10	EPA 410.4	MAQ	05/02/05 16:00	
Nitrogen, Ammonia	<1.0 mg/l	1.0	SM 4500-NH3 F	SAA	05/02/05 12:05	
<i>Determination of Dissolved Metals</i>						
Iron, dissolved	<0.030 mg/l	0.030	EPA 6010B	SNT	04/29/05 14:43	
15D1321-03 MW-92-1R			Matrix: Water		Collected: 04/28/05 11:00	
<i>Determination of Volatile Organic Compounds</i>						
Trichloroethylene	<0.3 ug/l	0.3	EPA 8260B	TVK	04/29/05 23:06	

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Shekar Engineering
8938 Highland Oaks Drive
Johnston, IA 50131

May 06, 2005

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Work Order: 15D1321

Analyte	Result	MRL	Method	Analyst	Analyzed	Qualifier
15D1321-03 MW-92-1R			Matrix:Water		Collected: 04/28/05 11:00	
<i>Determination of Volatile Organic Compounds</i>						
Surrogate: Dibromofluoromethane	102 %		83-123	TVK	04/29/05 23:06	
Surrogate: 1,2-Dichloroethane-d4	97.7 %		79-128	TVK	04/29/05 23:06	
Surrogate: Toluene-d8	102 %		83-114	TVK	04/29/05 23:06	
Surrogate: 4-Bromofluorobenzene	99.3 %		81-114	TVK	04/29/05 23:06	
<i>Determination of Conventional Chemistry Parameters</i>						
Chloride	103 mg/l	10	EPA 9252	MAQ	04/29/05 16:18	
Chemical Oxygen Demand	<10 mg/l	10	EPA 410.4	MAQ	05/02/05 16:00	
Nitrogen, Ammonia	<1.0 mg/l	1.0	SM 4500-NH3 F	SAA	05/02/05 12:05	
<i>Determination of Dissolved Metals</i>						
Iron, dissolved	<0.030 mg/l	0.030	EPA 6010B	SNT	04/29/05 14:48	
15D1321-04 MW-92-2			Matrix:Water		Collected: 04/28/05 09:45	
<i>Determination of Volatile Organic Compounds</i>						
Trichloroethylene	3.2 ug/l	0.3	EPA 8260B	TVK	04/29/05 23:44	
Surrogate: Dibromofluoromethane	102 %		83-123	TVK	04/29/05 23:44	
Surrogate: 1,2-Dichloroethane-d4	97.6 %		79-128	TVK	04/29/05 23:44	
Surrogate: Toluene-d8	101 %		83-114	TVK	04/29/05 23:44	
Surrogate: 4-Bromofluorobenzene	98.8 %		81-114	TVK	04/29/05 23:44	
<i>Determination of Conventional Chemistry Parameters</i>						
Chloride	40 mg/l	10	EPA 9252	MAQ	04/29/05 16:18	
Chemical Oxygen Demand	<10 mg/l	10	EPA 410.4	MAQ	05/02/05 16:00	
Nitrogen, Ammonia	<1.0 mg/l	1.0	SM 4500-NH3 F	SAA	05/02/05 12:05	
<i>Determination of Dissolved Metals</i>						
Iron, dissolved	4.21 mg/l	0.030	EPA 6010B	SNT	04/29/05 14:52	
15D1321-05 MW-92-4			Matrix:Water		Collected: 04/28/05 16:10	
<i>Determination of Volatile Organic Compounds</i>						
Trichloroethylene	<0.3 ug/l	0.3	EPA 8260B	TVK	04/30/05 0:22	
Surrogate: Dibromofluoromethane	102 %		83-123	TVK	04/30/05 0:22	
Surrogate: 1,2-Dichloroethane-d4	97.9 %		79-128	TVK	04/30/05 0:22	
Surrogate: Toluene-d8	102 %		83-114	TVK	04/30/05 0:22	
Surrogate: 4-Bromofluorobenzene	96.9 %		81-114	TVK	04/30/05 0:22	
<i>Determination of Conventional Chemistry Parameters</i>						
Chemical Oxygen Demand	<10 mg/l	10	EPA 410.4	MAQ	05/02/05 16:00	
Nitrogen, Ammonia	<1.0 mg/l	1.0	SM 4500-NH3 F	SAA	05/02/05 12:05	
Chloride	55 mg/l	10	EPA 9252	MAQ	04/29/05 16:18	
<i>Determination of Dissolved Metals</i>						

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Work Order: 15D1321

Analyte	Result	MRL	Method	Analyst	Analyzed	Qualifier
15D1321-05 MW-92-4			Matrix:Water		Collected: 04/28/05 16:10	
<i>Determination of Dissolved Metals</i>						
Iron, dissolved	<0.030 mg/l	0.030	EPA 6010B	SNT	04/29/05 14:56	
<i>Determination of Volatile Organic Compounds</i>						
Trichloroethylene	<0.3 ug/l	0.3	EPA 8260B	TVK	04/30/05 1:00	
Surrogate: Dibromofluoromethane	101 %		83-123	TVK	04/30/05 1:00	
Surrogate: 1,2-Dichloroethane-d4	97.8 %		79-128	TVK	04/30/05 1:00	
Surrogate: Toluene-d8	101 %		83-114	TVK	04/30/05 1:00	
Surrogate: 4-Bromofluorobenzene	101 %		81-114	TVK	04/30/05 1:00	
<i>Determination of Conventional Chemistry Parameters</i>						
Nitrogen, Ammonia	<1.0 mg/l	1.0	SM 4500-NH3 F	SAA	05/02/05 12:05	
Chloride	56 mg/l	10	EPA 9252	MAQ	04/29/05 16:18	
Chemical Oxygen Demand	15 mg/l	10	EPA 410.4	MAQ	05/02/05 16:00	
<i>Determination of Dissolved Metals</i>						
Iron, dissolved	5.78 mg/l	0.030	EPA 6010B	SNT	04/29/05 15:00	
15D1321-07 MW-92-6			Matrix:Water		Collected: 04/28/05 14:15	
<i>Determination of Volatile Organic Compounds</i>						
Trichloroethylene	<0.3 ug/l	0.3	EPA 8260B	TVK	04/30/05 1:38	
Surrogate: Dibromofluoromethane	103 %		83-123	TVK	04/30/05 1:38	
Surrogate: 1,2-Dichloroethane-d4	99.8 %		79-128	TVK	04/30/05 1:38	
Surrogate: Toluene-d8	101 %		83-114	TVK	04/30/05 1:38	
Surrogate: 4-Bromofluorobenzene	98.0 %		81-114	TVK	04/30/05 1:38	
<i>Determination of Conventional Chemistry Parameters</i>						
Nitrogen, Ammonia	<1.0 mg/l	1.0	SM 4500-NH3 F	SAA	05/02/05 12:05	
Chemical Oxygen Demand	23 mg/l	10	EPA 410.4	MAQ	05/02/05 16:00	
Chloride	126 mg/l	10	EPA 9252	MAQ	04/29/05 16:18	
<i>Determination of Dissolved Metals</i>						
Iron, dissolved	0.043 mg/l	0.030	EPA 6010B	SNT	04/29/05 15:05	
15D1321-08 MW-92-7			Matrix:Water		Collected: 04/28/05 13:30	
<i>Determination of Volatile Organic Compounds</i>						
Trichloroethylene	<0.3 ug/l	0.3	EPA 8260B	TVK	04/30/05 2:16	
Surrogate: Dibromofluoromethane	103 %		83-123	TVK	04/30/05 2:16	
Surrogate: 1,2-Dichloroethane-d4	101 %		79-128	TVK	04/30/05 2:16	
Surrogate: Toluene-d8	101 %		83-114	TVK	04/30/05 2:16	
Surrogate: 4-Bromofluorobenzene	98.8 %		81-114	TVK	04/30/05 2:16	

Determination of Conventional Chemistry Parameters

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May 06, 2005
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Work Order: 15D1321

Analyte	Result	MRL	Method	Analyst	Analyzed	Qualifier
15D1321-08 MW-92-7			Matrix:Water		Collected: 04/28/05 13:30	
<i>Determination of Conventional Chemistry Parameters</i>						
Chemical Oxygen Demand	28 mg/l	10	EPA 410.4	MAQ	05/02/05 16:00	
Nitrogen, Ammonia	<1.0 mg/l	1.0	SM 4500-NH3 F	SAA	05/02/05 12:05	
Chloride	61 mg/l	10	EPA 9252	MAQ	04/29/05 16:18	
<i>Determination of Dissolved Metals</i>						
Iron, dissolved	5.05 mg/l	0.030	EPA 6010B	SNT	04/29/05 15:17	
15D1321-09 Duplicate			Matrix:Water		Collected: 04/28/05 00:00	
<i>Determination of Volatile Organic Compounds</i>						
Trichloroethylene	3.2 ug/l	0.3	EPA 8260B	TVK	04/30/05 2:55	
Surrogate: Dibromofluoromethane	101 %		83-123	TVK	04/30/05 2:55	
Surrogate: 1,2-Dichloroethane-d4	99.6 %		79-128	TVK	04/30/05 2:55	
Surrogate: Toluene-d8	103 %		83-114	TVK	04/30/05 2:55	
Surrogate: 4-Bromofluorobenzene	97.9 %		81-114	TVK	04/30/05 2:55	
<i>Determination of Conventional Chemistry Parameters</i>						
Chloride	39 mg/l	10	EPA 9252	MAQ	04/29/05 16:18	
Chemical Oxygen Demand	16 mg/l	10	EPA 410.4	MAQ	05/02/05 16:00	
Nitrogen, Ammonia	<1.0 mg/l	1.0	SM 4500-NH3 F	SAA	05/02/05 12:05	
<i>Determination of Dissolved Metals</i>						
Iron, dissolved	3.82 mg/l	0.030	EPA 6010B	SNT	04/29/05 15:22	

End of Report

Keystone Laboratories, Inc.
Jeffrey King, Ph.D.
Laboratory Director

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CHAIN OF CUSTODY RECORD



600 E. 17th St. S.
Newton, IA 50208
Phone: 641-792-8451
Fax: 641-792-7989

3012 Ansborough Ave.
Waterloo, IA 50701
Phone: 319-235-4440
Fax: 319-235-2480
www.keystonelabs.com

1304 Adams
Kansas City, KS 66103
Phone: 913-321-7856
Fax: 913-321-7937

PAGE _____ OF _____

PRINT OR TYPE INFORMATION BELOW

SAMPLER: Wayne Shannon

SITE NAME: Concrete Supply

ADDRESS: 1180 SE 30th ST

CITY/ST/ZIP: Des Moines, IA

PHONE: _____

REPORT TO: Chandra
NAME: Shekar Engineering
COMPANY NAME:
ADDRESS: P.O. Box 3425
CITY/ST/ZIP: Des Moines, IA
PHONE: 334-5062
FAX: _____

BILL TO:
NAME: Shekar Eng
COMPANY NAME:
ADDRESS:
CITY/ST/ZIP:
PHONE:
Keystone Quote No.: _____

(If Applicable)

CLIENT SAMPLE NUMBER	DATE	TIME	SAMPLE LOCATION	NO. OF CONTAINERS	MATRIX	GRAB/COMPOSITE	ANALYSES REQUIRED						LAB USE ONLY		
							Landfill	E	Trichloroethylene				LABORATORY WORK ORDER NO.	SAMPLE TEMPERATURE UPON RECEIPT:	LABORATORY SAMPLE NUMBER
SW-1	28 Apr	10:20		6	H2O	G	X	X					1501321		01
MW-92-1		8:40		1											02
MW-92-1R		11:00		1											03
MW-92-2		9:45		1											04
MW-92-4		16:10		1											05
MW-92-5		15:30		1											06
MW-92-6		14:15		1											07
MW-92-7		13:30		1											08
Duplicate		—		1											09

Relinquished by: (Signature) <i>Wayne</i>	Date 28 Apr 05	Received by: (Signature)	Date	Turn-Around: <input checked="" type="checkbox"/> Standard	Rush _____
	Time 5:25		Time		Contact Lab Prior to Submission
Relinquished by: (Signature)	Date	Received for Lab by: (Signature) <i>Jeff King</i>	Date 04/28/05	Remarks:	
	Time		Time 5:25		

Accreditations:
Iowa DNR: 095
New Jersey DEP: IA001
Kansas DHE: E-10287

ANALYTICAL REPORT

November 28, 2005

Work Order: 15J1199

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Report To
Chandra Shekar Shekar Engineering 8938 Highland Oaks Drive Johnston, IA 50131

Work Order Information
Date Received: 10/27/2005 6:25PM
Collector: Shannon, Wayne
Phone: 515-334-5062
PO Number:

Project: Concrete Supply Landfill
Project Number: [none]

Analyte	Result	MRL	Method	Analyst	Analyzed	Qualifier
15J1199-01 SW-1			Matrix: Water		Collected: 10/27/05 15:45	
<i>Determination of Volatile Organic Compounds</i>						
Surrogate: 1,2-Dichloroethane-d4	91.9 %		71-129	TVK	11/09/05 15:23	
Surrogate: 4-Bromofluorobenzene	94.2 %		75-126	TVK	11/09/05 15:23	
Surrogate: Dibromofluoromethane	93.0 %		76-129	TVK	11/09/05 15:23	
Surrogate: Toluene-d8	101 %		85-112	TVK	11/09/05 15:23	
Trichloroethylene	<0.3 ug/l	0.3	EPA 8260B	TVK	11/09/05 15:23	
<i>Determination of Conventional Chemistry Parameters</i>						
Chemical Oxygen Demand	16 mg/l	10	EPA 410.4	MAQ	10/28/05 16:03	
Chloride	64 mg/l	10	EPA 9252	SAA	10/28/05 11:16	
Nitrogen, Ammonia	<1.0 mg/l	1.0	SM 4500-NH3 F	SAA	11/01/05 15:09	
Phenols, total	<0.100 mg/l	0.100	EPA 9065	KRV	11/02/05 12:40	
Total Organic Halogens (TOX)	0.026 mg/l	0.010	EPA 9020	RSW	11/14/05 0:00	
<i>Determination of Dissolved Metals</i>						
Iron, dissolved	0.085 mg/l	0.030	EPA 6010B	LAR	10/31/05 10:48	
15J1199-02 MW-92-1R			Matrix: Water		Collected: 10/27/05 15:25	
<i>Determination of Volatile Organic Compounds</i>						
Surrogate: 1,2-Dichloroethane-d4	94.6 %		71-129	TVK	11/09/05 16:07	
Surrogate: 4-Bromofluorobenzene	93.7 %		75-126	TVK	11/09/05 16:07	
Surrogate: Dibromofluoromethane	95.9 %		76-129	TVK	11/09/05 16:07	
Surrogate: Toluene-d8	99.3 %		85-112	TVK	11/09/05 16:07	
Trichloroethylene	<0.3 ug/l	0.3	EPA 8260B	TVK	11/09/05 16:07	
<i>Determination of Conventional Chemistry Parameters</i>						
Chemical Oxygen Demand	<10 mg/l	10	EPA 410.4	MAQ	10/28/05 16:03	
Chloride	83 mg/l	10	EPA 9252	SAA	10/28/05 11:16	
Nitrogen, Ammonia	<1.0 mg/l	1.0	SM 4500-NH3 F	SAA	11/01/05 15:09	
Phenols, total	<0.100 mg/l	0.100	EPA 9065	KRV	11/02/05 12:40	
Total Organic Halogens (TOX)	0.044 mg/l	0.010	EPA 9020	RSW	11/14/05 0:00	
<i>Determination of Dissolved Metals</i>						

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Work Order: 15J1199

Analyte	Result	MRL	Method	Analyst	Analyzed	Qualifier
15J1199-02 MW-92-1R <i>Determination of Dissolved Metals</i>			Matrix:Water		Collected: 10/27/05 15:25	
Iron, dissolved	<0.030 mg/l	0.030	EPA 6010B	LAR	10/31/05 10:52	
15J1199-03 MW-92-1 <i>Determination of Volatile Organic Compounds</i>			Matrix:Water		Collected: 10/27/05 17:25	
Surrogate: 1,2-Dichloroethane-d4	113 %		71-129	TVK	11/09/05 16:51	
Surrogate: 4-Bromofluorobenzene	91.6 %		75-126	TVK	11/09/05 16:51	
Surrogate: Dibromofluoromethane	105 %		76-129	TVK	11/09/05 16:51	
Surrogate: Toluene-d8	98.7 %		85-112	TVK	11/09/05 16:51	
Trichloroethylene	8.4 ug/l	0.3	EPA 8260B	TVK	11/09/05 16:51	
<i>Determination of Conventional Chemistry Parameters</i>						
Chemical Oxygen Demand	<10 mg/l	10	EPA 410.4	MAQ	10/28/05 16:03	
Chloride	54 mg/l	10	EPA 9252	SAA	10/28/05 11:16	
Nitrogen, Ammonia	<1.0 mg/l	1.0	SM 4500-NH3 F	SAA	11/01/05 15:09	
Phenols, total	<0.100 mg/l	0.100	EPA 9065	KRV	11/02/05 12:40	
Total Organic Halogens (TOX)	0.076 mg/l	0.010	EPA 9020	RSW	11/14/05 0:00	
<i>Determination of Dissolved Metals</i>						
Iron, dissolved	<0.030 mg/l	0.030	EPA 6010B	LAR	10/31/05 10:57	
15J1199-04 MW-92-2 <i>Determination of Volatile Organic Compounds</i>			Matrix:Water		Collected: 10/27/05 16:55	
Surrogate: 1,2-Dichloroethane-d4	96.6 %		71-129	TVK	11/09/05 17:35	
Surrogate: 4-Bromofluorobenzene	92.4 %		75-126	TVK	11/09/05 17:35	
Surrogate: Dibromofluoromethane	94.6 %		76-129	TVK	11/09/05 17:35	
Surrogate: Toluene-d8	99.5 %		85-112	TVK	11/09/05 17:35	
Trichloroethylene	<0.3 ug/l	0.3	EPA 8260B	TVK	11/09/05 17:35	
<i>Determination of Conventional Chemistry Parameters</i>						
Chemical Oxygen Demand	14 mg/l	10	EPA 410.4	MAQ	10/28/05 16:03	
Chloride	50 mg/l	10	EPA 9252	SAA	10/28/05 11:16	
Nitrogen, Ammonia	<1.0 mg/l	1.0	SM 4500-NH3 F	SAA	11/01/05 15:09	
Phenols, total	<0.100 mg/l	0.100	EPA 9065	KRV	11/02/05 12:40	
Total Organic Halogens (TOX)	0.037 mg/l	0.010	EPA 9020	RSW	11/14/05 0:00	
<i>Determination of Dissolved Metals</i>						
Iron, dissolved	7.05 mg/l	0.030	EPA 6010B	LAR	10/31/05 11:01	
15J1199-05 MW-92-3 <i>Determination of Volatile Organic Compounds</i>			Matrix:Water		Collected: 10/27/05 14:20	
Surrogate: 1,2-Dichloroethane-d4	98.1 %		71-129	TVK	11/09/05 18:19	
Surrogate: 4-Bromofluorobenzene	94.9 %		75-126	TVK	11/09/05 18:19	

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Work Order: 15J1199

Analyte	Result	MRL	Method	Analyst	Analyzed	Qualifier
15J1199-05 MW-92-3			Matrix:Water		Collected:	10/27/05 14:20
<i>Determination of Volatile Organic Compounds</i>						
Surrogate: Dibromofluoromethane	96.5 %		76-129	TVK	11/09/05	18:19
Surrogate: Toluene-d8	99.5 %		85-112	TVK	11/09/05	18:19
Trichloroethylene	0.4 ug/l	0.3	EPA 8260B	TVK	11/09/05	18:19
<i>Determination of Conventional Chemistry Parameters</i>						
Chemical Oxygen Demand	12 mg/l	10	EPA 410.4	MAQ	10/28/05	16:03
Chloride	49 mg/l	10	EPA 9252	SAA	10/28/05	11:16
Nitrogen, Ammonia	<1.0 mg/l	1.0	SM 4500-NH3 F	SAA	11/01/05	15:09
Phenols, total	<0.100 mg/l	0.100	EPA 9065	KRV	11/03/05	16:18
Total Organic Halogens (TOX)	0.099 mg/l	0.010	EPA 9020	RSW	11/14/05	0:00
<i>Determination of Dissolved Metals</i>						
Iron, dissolved	<0.030 mg/l	0.030	EPA 6010B	LAR	10/31/05	11:05
15J1199-06 MW-92-4			Matrix:Water		Collected:	10/27/05 12:20
<i>Determination of Volatile Organic Compounds</i>						
Surrogate: 1,2-Dichloroethane-d4	99.6 %		71-129	TVK	11/09/05	19:03
Surrogate: 4-Bromofluorobenzene	92.7 %		75-126	TVK	11/09/05	19:03
Surrogate: Dibromofluoromethane	96.0 %		76-129	TVK	11/09/05	19:03
Surrogate: Toluene-d8	100 %		85-112	TVK	11/09/05	19:03
Trichloroethylene	<0.3 ug/l	0.3	EPA 8260B	TVK	11/09/05	19:03
<i>Determination of Conventional Chemistry Parameters</i>						
Chemical Oxygen Demand	<10 mg/l	10	EPA 410.4	MAQ	10/28/05	16:03
Chloride	106 mg/l	10	EPA 9252	SAA	10/28/05	11:16
Nitrogen, Ammonia	<1.0 mg/l	1.0	SM 4500-NH3 F	SAA	11/01/05	15:09
Phenols, total	<0.100 mg/l	0.100	EPA 9065	KRV	11/03/05	16:18
Total Organic Halogens (TOX)	0.049 mg/l	0.010	EPA 9020	RSW	11/14/05	0:00
<i>Determination of Dissolved Metals</i>						
Iron, dissolved	<0.030 mg/l	0.030	EPA 6010B	LAR	10/31/05	11:09
15J1199-07 MW-92-5			Matrix:Water		Collected:	10/27/05 11:45
<i>Determination of Volatile Organic Compounds</i>						
Surrogate: 1,2-Dichloroethane-d4	98.2 %		71-129	TVK	11/09/05	19:47
Surrogate: 4-Bromofluorobenzene	95.0 %		75-126	TVK	11/09/05	19:47
Surrogate: Dibromofluoromethane	95.5 %		76-129	TVK	11/09/05	19:47
Surrogate: Toluene-d8	99.6 %		85-112	TVK	11/09/05	19:47
Trichloroethylene	<0.3 ug/l	0.3	EPA 8260B	TVK	11/09/05	19:47
<i>Determination of Conventional Chemistry Parameters</i>						
Chemical Oxygen Demand	16 mg/l	10	EPA 410.4	MAQ	10/28/05	16:03

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Shekar Engineering
8938 Highland Oaks Drive
Johnston, IA 50131

November 28, 2005
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Work Order: 15J1199

Analyte	Result	MRL	Method	Analyst	Analyzed	Qualifier
15J1199-07 MW-92-5			Matrix:Water		Collected:	10/27/05 11:45
<i>Determination of Conventional Chemistry Parameters</i>						
Chloride	52 mg/l	10	EPA 9252	SAA	10/28/05 11:16	
Nitrogen, Ammonia	<1.0 mg/l	1.0	SM 4500-NH3 F	SAA	11/01/05 15:09	
Phenols, total	<0.100 mg/l	0.100	EPA 9065	KRV	11/03/05 16:18	
Total Organic Halogens (TOX)	0.041 mg/l	0.010	EPA 9020	RSW	11/14/05 0:00	
<i>Determination of Dissolved Metals</i>						
Iron, dissolved	6.07 mg/l	0.030	EPA 6010B	LAR	10/31/05 11:13	
15J1199-08 MW-92-6			Matrix:Water		Collected:	10/27/05 10:20
<i>Determination of Volatile Organic Compounds</i>						
Surrogate: 1,2-Dichloroethane-d4	98.5 %		71-129	TVK	11/09/05 20:31	
Surrogate: 4-Bromofluorobenzene	92.1 %		75-126	TVK	11/09/05 20:31	
Surrogate: Dibromofluoromethane	96.7 %		76-129	TVK	11/09/05 20:31	
Surrogate: Toluene-d8	99.4 %		85-112	TVK	11/09/05 20:31	
Trichloroethylene	<0.3 ug/l	0.3	EPA 8260B	TVK	11/09/05 20:31	
<i>Determination of Conventional Chemistry Parameters</i>						
Chemical Oxygen Demand	16 mg/l	10	EPA 410.4	MAQ	10/28/05 16:03	
Chloride	103 mg/l	10	EPA 9252	MAQ	10/31/05 10:40	
Nitrogen, Ammonia	<1.0 mg/l	1.0	SM 4500-NH3 F	SAA	11/01/05 15:09	
Phenols, total	<0.100 mg/l	0.100	EPA 9065	KRV	11/03/05 16:18	
Total Organic Halogens (TOX)	0.052 mg/l	0.010	EPA 9020	RSW	11/14/05 0:00	
<i>Determination of Dissolved Metals</i>						
Iron, dissolved	0.232 mg/l	0.030	EPA 6010B	LAR	10/31/05 11:18	
15J1199-09 MW-92-7			Matrix:Water		Collected:	10/27/05 09:45
<i>Determination of Volatile Organic Compounds</i>						
Surrogate: 1,2-Dichloroethane-d4	97.3 %		71-129	TVK	11/09/05 21:14	
Surrogate: 4-Bromofluorobenzene	92.4 %		75-126	TVK	11/09/05 21:14	
Surrogate: Dibromofluoromethane	97.2 %		76-129	TVK	11/09/05 21:14	
Surrogate: Toluene-d8	100 %		85-112	TVK	11/09/05 21:14	
Trichloroethylene	<0.3 ug/l	0.3	EPA 8260B	TVK	11/09/05 21:14	
<i>Determination of Conventional Chemistry Parameters</i>						
Chemical Oxygen Demand	11 mg/l	10	EPA 410.4	MAQ	10/28/05 16:03	
Chloride	55 mg/l	10	EPA 9252	MAQ	10/31/05 10:40	
Nitrogen, Ammonia	<1.0 mg/l	1.0	SM 4500-NH3 F	SAA	11/01/05 15:09	
Phenols, total	<0.100 mg/l	0.100	EPA 9065	KRV	11/03/05 16:18	
Total Organic Halogens (TOX)	0.041 mg/l	0.010	EPA 9020	RSW	11/14/05 0:00	
<i>Determination of Dissolved Metals</i>						

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Work Order: 15J1199

Analyte	Result	MRL	Method	Analyst	Analyzed	Qualifier
15J1199-09 MW-92-7			Matrix: Water		Collected: 10/27/05 09:45	
<i>Determination of Dissolved Metals</i>						
Iron, dissolved	5.50 mg/l	0.030	EPA 6010B	LAR	10/31/05 11:22	
 <i>Determination of Dissolved Metals</i>						
15J1199-10 Duplicate			Matrix: Water		Collected: 10/27/05 00:00	
<i>Determination of Volatile Organic Compounds</i>						
Surrogate: 1,2-Dichloroethane-d4	99.8 %		71-129	TVK	11/09/05 21:58	
Surrogate: 4-Bromofluorobenzene	91.5 %		75-126	TVK	11/09/05 21:58	
Surrogate: Dibromofluoromethane	97.5 %		76-129	TVK	11/09/05 21:58	
Surrogate: Toluene-d8	102 %		85-112	TVK	11/09/05 21:58	
Trichloroethylene	0.5 ug/l	0.3	EPA 8260B	TVK	11/09/05 21:58	
<i>Determination of Conventional Chemistry Parameters</i>						
Chemical Oxygen Demand	<10 mg/l	10	EPA 410.4	MAQ	10/28/05 16:03	
Chloride	51 mg/l	10	EPA 9252	MAQ	10/31/05 10:40	
Nitrogen, Ammonia	<1.0 mg/l	1.0	SM 4500-NH3 F	SAA	11/01/05 15:09	
Phenols, total	<0.100 mg/l	0.100	EPA 9065	KRV	11/03/05 16:18	
Total Organic Halogens (TOX)	0.040 mg/l	0.010	EPA 9020	RSW	11/14/05 0:00	
 <i>Determination of Dissolved Metals</i>						
Iron, dissolved	<0.030 mg/l	0.030	EPA 6010B	LAR	10/31/05 11:35	

End of Report

Keystone Laboratories, Inc.
Jeffrey King, Ph.D.
Laboratory Director

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CHARTER OF CUSTODY RECORD



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1304 Adams
Kansas City, KS 66103
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Fax: 913-321-7937

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PRINT OR TYPE INFORMATION BELOW

SAMPLER: Wayne Shannon

SITE NAME: Concrete Supply

ADDRESS: 1108 SE 30th St.

CITY/ST/ZIP: Des Moines

PHONE:

REPORT TO:
NAME: Chandra Shekar
COMPANY NAME: Shekar Engineering
ADDRESS: P.O. Box 3625
CITY/ST/ZIP: Des Moines, IA
PHONE: 334-5062
FAX:

BILL TO:
NAME: Shikar Eng
COMPANY NAME:
ADDRESS:
CITY/ST/ZIP:
PHONE:
Keystone Quote No.: (If Applicable)

CLIENT SAMPLE NUMBER	DATE	TIME	SAMPLE LOCATION	NO. OF CONTAINERS	MATRIX	GRAB/COMPOSITE	ANALYSES REQUIRED			LAB USE ONLY		
							Landfill 1	Landfill 2	Trichloroethylene	LABORATORY WORK ORDER NO.	SAMPLE TEMPERATURE UPON RECEIPT:	LABORATORY SAMPLE NUMBER
SW-1	27/06/15	15:45		3	LOG	X	X	X		15J119899	°C	
MW-92-1R		15:25		1								01
MW-92-1		17:25		1								02
MW-92-2		16:55		1								03
MW-92-3		14:20		1								04
MW-92-4		12:20		1								05
MW-92-5		11:45		1								06
MW-92-6		10:20		1								07
MW-92-7		9:45		1								08
Duplicate	✓	—		1								09
				1								10

Relinquished by: (Signature) <i>Wayne Shannon</i>	Date 27/06/05 Time 18:25	Received by: (Signature)	Date	Turn-Around: <input checked="" type="checkbox"/> Standard	<input type="checkbox"/> Rush _____
Relinquished by: (Signature)	Date	Received for Lab by: (Signature) <i>Jeff King</i>	Date 10/07/05 Time 18:28	Remarks:	Contact Lab Prior to Submission

Original - Return with Report

Yellow - Lab Copy

Pink - Sampler Copy

FORM: CCR 7-97